MALAYSIAN SECTOR PROFILES

CONDUCTED FOR

THE CANADIAN HIGH COMMISSION

KUALA LUMPUR

SECTORS: TELEVISION/BROADCASTING
AND TELECOMMUNICATIONS

Econsult Sdn Bhd

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TELEVISION/BROADCASTING AND TELECOMMUNICATIONS IN MALAYSIA

RESEARCH

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THE CANADIAN HIGH COMMISSION

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A. TV AND BROADCASTING SECTOR

1.0 INTRODUCTION

The major carrier of radio and television programming in Malaysia is Radio Television Malaysia or RTM. Currently a Department in the Ministry of Information, RTM broadcasts on seven radio networks and two television channels. A privately owned network, System Television Malaysia, known as TV3, broadcasts as well on a single channel. Recently several private companies, including Melewar Corporation Bhd, submitted an application to operate a second private television station, TV4, for the Klang Valley which includes Kuala Lumpur. According to the chairman of Melewar, the "New Metropolitan Channel" will service small scale regional advertisers as well as accommodate the needs of urban dwellers. However the application has been rejected by the Information Ministry on the grounds that existing broadcasting facilities are adequate and there is no need for a new TV network (Business Times 26/9/89). Melewar has indicated that it will appeal the decision.

2.0 RECENT INVESTMENTS BY RTM

The contact from RTM interviewed for this sectoral study is Mr. Lee Thian Chew, Deputy Director General (Engineering) of the Department of Broadcasting. Recent investments (i.e investments which are either already awarded or due to be awarded soon) by RTM include :

i) Purchase of FM transmitters
This M$8.0 million tender has already been awarded and equipment is due to be delivered in 1990

ii) Purchase of television receive only stations or TVROs for reception of international TV signals

iii) Purchase of Radio Studio Equipment and related work M$6.0 million

iv) Purchase of newsgathering satellite (SNG) worth M$3.5 - 4.0 million

3.0 WEAKNESSES OF CANADIAN COMPANIES

Canadian companies are not well represented in the radio and television broadcasting equipment sector. As Mr. Lee pointed out, Canadian products and product brands are not well known or acknowledged in the Malaysian market. He added that Canadian suppliers have not quoted on any of the major tenders.

4.0 STRENGTH OF MAJOR COMPETITORS

The strength of the major competitors, namely Japan and West Germany, is attributed to the following factors :

i) Competitor companies, particularly the Japanese, have strong local representation and therefore make their presence felt.
ii) Products are priced very competitively.
iii) Product lines are well known and well established.

5.0 COMPETITORS' MARKETING STRATEGY

i) Maintaining close contact with end users and key decision makers.
ii) Organizing conferences, seminars and exhibitions to promote their products.

6.0 FACTORS INFLUENCING COMPETITION

While price is an important factor to be considered, there are other factors which come into play in the awarding of tenders. These include :

i) Product quality - it is important that the product is well established world wide
ii) Standardization of product
iii) Familarity with a particular product brand
iv) Minimization of spare equipment purchases.
(For every unit purchased, RTM has to purchase a spare unit. However if RTM purchases ten of the same units, only three spare units are required).

7.0 TECHNOLOGY TRANSFER, TRAINING & AFTER SALES SERVICE

According to Mr. Lee T.C., "Technology transfer, training and after sales services are part and parcel of the tender package". These three factors are taken into account in the evaluation of a tender.

8.0 COUNTERTRADE REQUIREMENT

Counter trade is an important but not a critical factor. The counter trade requirement is stipulated by the Ministry of Trade and Industry. However, to the best of Mr. Lee's knowledge, no tender for RTM has been rejected on the grounds that there was a lack of counter trade.

9.0 IMPORT TARIFF STRUCTURE

Being a Government department, all items imported by RTM are exempt from import duties.

10.0 MARKET SIZE

. **TV Transmitters** (1-10kw transmitters, including transponders)

1987	1988	1989	1990-1995
M$0.5 million	M$2.0 million	M$0.5 million	M$200 million to replace old transmitters

. **FM Transmitters**

1987	1988	1989	1990-1995
M$2.0 million	M$0.5 million	M$0.5 million	M$30 million

. **AM Transmitters**

1987	1988	1989	1990-1995
M$1.0 million	M$1.0 million	M$1.0 million	M$20 million

. **Radio Studio Equipment**

1987	1988	1989	1990
M$0.5 million	M$0.5 million	M$0.5 million	M$5.0 million

1991-1993
M$20 million

. **TV Studio Equipment**

1987	1988	1989	1990
M$1.0 million	M$8.0 million	M$5.0 million	M$10.0 million

1991-1993
M$30.0 million

TV Receive Only Dish (TVRO)

1987	1988	1989	1990-1995
M$0.5 million	M$5.0 million	M$0.5 million	M$150 million

1995-2000

M$600 million (pending implementation of Direct Broadcast Satellite system).

RTM recently announced its plans to set up an internal network of television receive only stations or TVROs (Business Times 7/8/89). Transponder Services, the company which was awarded the letter of intent in May 1989 for the engineering, supply and maintenance of RTM's TVRO system, will conduct a survey and frequency coordination test. The Director of Transponder Services Sheikh Abdul Rahim Datuk Sheikh Bakar revealed that the survey is expected to cost M$1 million and will take about three months to complete. A 16-member team comprising French and local satellite communication experts will be involved in the survey. The French experts are from Sofratev, Telediffusion de France.

Transponder Services signed an agreement with Sofratev for the supply of hardware and technical services for the project. As the main contractor, Sofratev will package the project on a turnkey basis and arrange the financing.

The TVRO network plan, part of RTM's ambitious M$500 million modernization plan, is the first step towards implementation of the Direct Broadcasting Satellite (DBS) system. It is understood that RTM's modernization proposal was submitted to the Treasury early this year. According to the Business Times, sources have indicated that the funding was approved recently. However no official announcement has been made as yet (Business Times 7/8/89). Once the TVRO networks is completed in about 20 months, RTM will cease to transmit via the microwave links network. Under the agreement, Transponder Services, the concession holder, will charge RTM M$15 million a year. Presently RTM pays Syarikat Telekom Malaysia (STM) M$45 million a year for using the microwave network.

According to Sheikh Abdul Rahim, a total of 31 TVRO stations will be set up throughout the country. These stations will be located near RTM's present transmitter sites. When RTM broadcasts via satellite, viewers will still receive TV programmes the usual way except that the quality of audio and visual reception will be greatly improved. Programmes will be transmitted to houses via the Indonesian Palapa satellite and the soon to be built TVRO network. Installation of the TVRO stations is expected to maximize the use of RTM's existing satellite complex, Konsar. Under the programme, RTM is offered seven FM radio networks as well as another seven as backup and two TV channels and two reserves. The Indonesian satellite has excess capacity to offer to its Asean neighbours. In fact, Thailand television is using some of the channels at the present time.

RTM's plan to implement the M$150 million TVRO network project has raised the hopes of the French-based Alcatel Telspace to break into the Malaysian market (Business Times 27/9/89). Alcatel Telspace, a subsidiary of the Alcatel Group, is a supplier of satellite communication equipment such as earth stations and transponders. It is a major supplier to the French Government television network Telediffusion de France's subsidiary, Sofratev. In view of its strong relations with Sofratev, Alcatel Telspace feels that it deserves a fair share of the Malaysian market. The French company earlier tried to break into the local market by bidding for the supply of the Kuantan satellite earth station. However it lost the contract to Mitsubishi Electric Corporation.

Alcatel Telspace's Asia-Pacific and Eastern Europe Vice President Thierry de Venssay contends that Alcatel Telspace ranks second after NEC in world satellite communication technology. To date, the company has installed TVRO earth stations in 24 countries. Malaysia is its first potential TVRO customer in the South-East Asia region. (Business Times, 27/9/89). Apart from supplying the equipment, the company plans to send its engineers to help in the implementation of the TVRO project once it gets the supply contract.

It is understood that Alcatel Telspace has no plans to set up a company in Malaysia even if it succeeds in securing a contract. It will have to depend on the existing Alcatel group representative in Kuala Lumpur, according to Mr. de Venssay. This is because the Alcatel Telspace office in France is small (with a workforce of 350 people) compared with the rest of Alcatel's subsidiaries. Thus, it is not viable for the company to be on its own in Malaysia.

All the TV and broadcasting equipment discussed so far refers to the hardware. With regard to software, Mr. Lee of the Department of Broadcasting estimated computerization expenditure for the 1990 to 1995 period at about M$5.0 million. He cautioned however that it is difficult to assess computerization expenditure accurately since orders for a particular programme will be made as and when the need for such a system arises.

As for consultancy services, these usually comes together with the hardware as a package. This appears to be the case for turnkey projects. The market size for consultancy services in the broadcasting sector is estimated at about M$1.0 million per annum.

Canadian companies are not well represented in the broadcasting sector. Mr. Lee pointed out that Canadian involvement/participaction in advanced technology products for broadcasting is very small, i.e less than 1% of the total market share. He added that one of the reasons why Canadian companies have failed to make any significant inroads into the broadcasting market is because Canadian products are not priced competitively.

The cumulative export potential for Canadian products and/or services in the broadcasting sector for the next three years is estimated at between M$3.0 million and M$5.0 million.

The major competing countries and their market share percentages for 1990 are as follows :

	Country	% of Market Share
1.	Japan	35%
2.	West Germany	30%
3.	United Kingdom	15%
4.	U.S.A	10%
5.	Singapore	5%
6.	Italy	5%

The current status of Canadian broadcasting equipment exports to Malaysia is best described by Mr. Lee as "no export results to date but some potential for first sales in near future".

11.0 FORTHCOMING PROJECTS

Products or services for which there are good market prospects for Canadian companies in the broadcasting sector are :

1. 1-10 kilowatt TV transmitters (1990-1995 expenditure : M$200 million)
2. FM transmitters (1991-1993 expenditure : M$30 million)
3. AM transmitters (1991-1993 expenditure : M$20 million)
4. Radio Studio Equipment (1991-1993 expenditure: M$20 million)
5. TV Studio Equipment (1991-1993 expenditure : M$30 million)
6. TV Receive Only Dish (TVRO) (TVRO network project : M$150 million)
   (1995-2000 estimated expenditure if Direct Broadcast Satellite system or DBS is implemented : M$600 million
7. Earth Stations
8. Data over voice systems

B. TELECOMMUNICATIONS SECTOR

1.0 PRIVATIZATION OF JABATAN TELEKOM MALAYSIA (JTM)

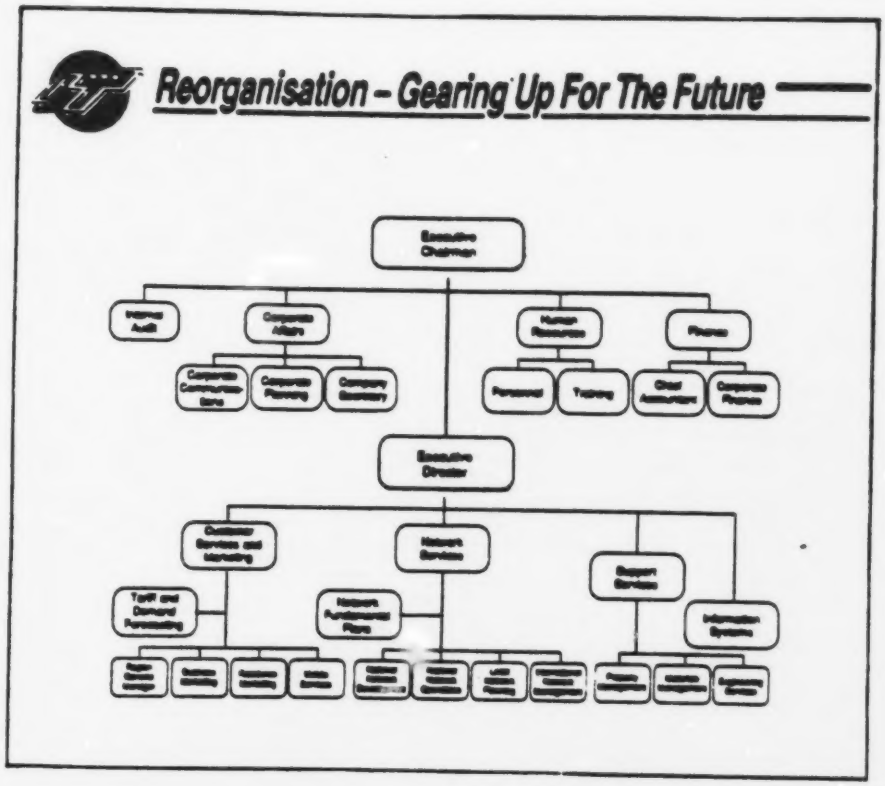
In January 1987, the country's telecommunications service under Jabatan Telekom Malaysia (JTM) became the first public sector organisation to be corporatized when it began operations under the name Syarikat Telekom Malaysia Berhad or STM. STM is expected to move from corporatization to complete privatization sometime in the 1990's. In November 1988, the Malaysian Business magazine featured a cover article on the privatization of JTM, entitled "Privatization : Telekom Copes With Enterprise". A copy of this article, which describes the transformation that STM has undergone following its corporatization, is included as Appendix B of this report.

One of the more obvious changes that have taken place in the almost three years since corporatization is the formation of a new organization structure, as shown in Fig 1 below. Shifts in emphasis and orientation at the corporate level with respect to closeness to customer, commercial approach to decision-making and financial control have been ongoing.

The reorganization consolidates these while at the same time initiates the physical change to make the customer central to STM's existence and make managers more accountable for performance whether in network, customer or other services. As stated by Arthur D Little & Hays Management (the Consultants engaged by STM to transform its management and operations) in its final report : "The objective of the proposed change in STM's organization and management is to achieve a shift to a managerial mind-set that is technically competent but market-driven".

Thus the reorganization is geared towards transforming STM into a marketing and customer orientated organization which serves its customers more effectively and efficiently and ensures that it maintains its competitive edge. To achieve this, STM must strive to encourage customers to use more of its services to make them more successful in their business ventures. Furthermore, customers have to be educated in all the various products marketed by STM, particularly in the new valueadded products. The new organization demands that STM staff go out to meet potential customers, provide them with accurate and timely service and ensures that customer satisfaction is always maintained. The marketing environment that needs to be created is one in which the Marketing Group will make the necessary transactions and it is the duty of the Network Group to match the demands that are generated.

Figure 1:



2.0 SYARIKAT TELEKOM MALAYSIA

a) Financial Performance

For the financial year ended December 31st, 1988 STM made a 36-fold increase in its pre-tax profit, i.e M$180.4 million against M$4.9 million previously (Business Times, July 4th 1989). 1988 year was the second year of operation for STM since it took over all the business assets and liabilities of Jabatan Telekom Malaysia. The 36-fold increase in pre-tax profit was achieved on the back of a turnover of M$1.699 billion, an increase of 12% from M$1.522 billion the preceding year.

The telephone sector (i.e revenues derived from the provision of basic telephone services including payphones and the ATUR mobile telephone service) accounted for 88% of total revenue, and grew at a rate of 10.2%. In terms of customer profile, residential subscribers formed 68% of the total 1.3 million lines in use while business telephones accounted for 27% of subscribers. The residential sector recorded a growth rate of 10.7%, compared with 10.4% in 1987, whilst the business sector grew by 8.2% against 4.3% previously. Mobile telephone service (ATUR) continued its momentum of strong growth with a 59% increase in customers growing from 17,000 in 1987 to 27,000 in 1988. The number of ATUR subscribers at the end of May 1989 had increased to 32,000.

The higher profits in 1988 can be attributed largely to the various cost cutting measures being taken by STM and to the increased turnover. For instance, operating expenditure, which amounted to M$610 million, only rose 3.7% last year, while non-operating expenditure fell 52%. Although depreciation at M$548.7 million came to a substantial 32% of turnover, it was quite reasonable in view of STM's large assets base of $6.5 billion of which a large portion is high technology equipment.

It would not be very fair to compare the poor performance of 1987 with that of 1988 since 1987 was a bad year for the telecommunications industry in general. Furthermore, it would not be fair to compare STM's performance with that of JTM which recorded a profit of M$160 million in 1986 and M$348 million in 1985. This is because as a government department, there was a lot of expenditure which was not taken into account unlike STM which must absorb all costs. For instance, the rate of depreciation at STM is much higher, and JTM, as a government department, was not paying rent.

Total loans outstanding at the end of last year came to M$4.36 billion against $4.65 billion previously. This represents an improved debt to equity ratio of 1.8 times against 2.2 times previously. STM had assumed M$4.5 billion in loan liabilities when it took over from JTM of which M$4.0 billion were in government loans. So far STM has repaid about $500 million of the loans. Mr. Manickam, the Head of the Corporate Planning Division at STM, has pointed out that by comparison, Singapore Telecoms' not only has zero interest payments but also has fixed deposits worth S$2.2 billion. The strong financial position of Singapore

Telecom can be attributed to the fact that nearly all their projects are both viable and profitable. In the case of STM, however, some projects may have only very marginal profits while others such as the rural telecommunications project are completely unprofitable but are provided in the interests of equal access to services.

While 1988 has been a good year for STM, there is still room for improvement before the company can seek a listing on the Kuala Lumpur Stock Exchange. For one, its debt to equity ratio must be further reduced while its profitability must at least be maintained over the next few years. It must also be able to shed its "government department" image and become a truly efficient company that is responsive to market needs.

On network expansion and modernization, STM's capital expenditure which amounted to M$541 million last year is expected to increase to M$850 million this year (Business Times, July 4th 1989).

b) Growth Potential

STM Executive Chairman, Tan Sri Dr. Rashdan Baba, has projected a yearly 12% to 15% growth for the telecommunications sector for the next five years (Business Times, July 3rd, 1989). He added that the business sector will be expected to spearhead much of the growth. In agreement with Tan Sri Dr. Rashdan, Datuk A. Karim Ikram, the President of Kumpulan AKZ (one of STM's turnkey contractors) believes that as much as 30% of the growth in telephone lines will be accounted for by the business sector alone. However Datuk Karim argues that the yearly 12% to 15% growth projection made by STM may be conservative by the standards of economic growth today. If a figure of 8% could be achieved during the years of economic slowdown, the telecommunications sector is likely to see faster growth in the next few years. Kumpulan AKZ subsidiary Bina Telecommunications is presently at the end of a M$630 million, 5 year turnkey contract to plan and design local area cable networks for STM. Three other companies, Uniphone, Electroscon and Sri Communications are also handling similar contracts. Binafon was recently awarded an M$18 million contract to increase the number of channels on STM's ATUR 450 mobile telephone system and hopes to win the contract for the addition of a further 300-400 channels on the nationwide system.

The total number of telephone subscribers is growing at an average of 11% a year according to the STM Executive Chairman (Business Times September 29th, 1989). STM is now capable of rectifying 92% of total phone disorders within 24 hours compared with only 89% last year. In view of the improved efficiency, a growth rate of about 12% is anticipated for the telephone subscriber sector over the next few years (Business Times, September 29th 1989).

With respect to the utilization rate, 42% of the 3.0 million line-capacity local network was utilized in 1988. This is expected to rise to 43% in 1989. In switching, the utilization

rate last year was 52% and is projected to increase to 54% this year. Total switching capacity at the end of the last financial year stood at 2.4 million lines equivalent. As of the end of August 1989, there were 1,341,185 phone lines in service. The existing network covers the entire country.

During the third quarter of 1988, the second phase of itemized billing was launched involving 106 exchanges with a total capacity of about 600,000 lines. Forty five percent of the 600,000 new telephone lines installed are currently not utilized (Business Times, September 27th, 1989). STM plans to embark on a more aggressive marketing campaign to maximize the utilization of its telephone line capacity. Under the promotion campaign, the company will introduce incentives to encourage people to subscribe for a telephone service or take up a second line. It is understood that if the lines remain unused, the Ministry of Energy, Telecommunications and Posts will allow private companies to lease lines from the network providers for resale to end users. Such a system, known as the simple resale of lines, is practised in the U.K by both the British Telecom and its competitor Mercury Communication. It is believed that this will inject fresh competition into the industry.

c) Telephone Set Suppliers

During the first six months of this year, there was an increase of 60,000 telephone customers, as compared with a rise of 89,000 customers for the whole of 1987. Average monthly installations increased to 10,875 last year, compared to 17,850 in 1987 and 15,420 in 1986. With the continued fast growth in the economy, STM has been facing problems supplying phone sets in areas where there is demand, particularly in the northern region, the east coast area and in various areas in the central region. Consequently, STM invited tenders for the supply of telephone sets in December 1988. The international tender attracted bids from such companies as Northern Telecom of Canada, Samsung of South Korea, Phillips of Holland, GEC Plessey Telecommunications (GPT) of U.K, Ericsson of Sweden, Formula Electronics and also local companies such as Pernas NEC and Uniphone, a subsidiary of Sapura Holdings Sdn Bhd.

The M$24 million two-year contract for 600,000 phones was awarded to Formula Electronics, a wholly owned Taiwanese company based in Penang. The contract marked the latest in a rather chequered series of contracts awarded since 1977 by STM's predecessor, Jabatan Telekom Malaysia (JTM). A spokesman for Formula said that the company will have no problem meeting STM's requirement as the volume can be produced in a matter of two months (Business Times, September 8th, 1989). Operating out of the Prai Free Trade Zone, Formula Electronics produces and exports an average of 350,000 units of phones monthly. Formula is a subsidiary of Dialer and Business Electronics Ltd of Taiwan. The company started manufacturing in August 1988 and is licensed to produce multi-feature and function telephone, telephone answering devices and standard and novelty items. Formula currently manufactures wholly for export and its customers include US buyers such as General

Electric, Conair, Code-A-Phone, AT&T and Northwestern Bell.

It is understood that the cost differential between the Taiwanese phones and Uniphone's sets was the main reason that Formula won the contract. While Uniphone (a long time supplier of telephone sets to STM) offered its phones at M$54 a set, Formula cited $40 a set, inclusive of import duty. The possible exclusion of Uniphone from the bid does not augur well for the future or locally owned telephone manufacturing companies. As far back as 1978 Uniphone supplied some 1.5 million phones to STM. Its locally produced phones have been type approved both by the Standards and Industrial Research Institute of Malaysia (SIRIM) and JTM.

The supply of phones was limited to a quantity contract with Uniphone for 110,000 phones to be supplied between June and the end of 1989. The contract for the supply of the locally made S2000A phone was, however, viewed as a stop-gap measure pending the award of the contract. The shortage situation is believed to be attributed to two factors :

i) inconsistency in market demand for phones
ii) STM's failure to match stocks with anticipated demand

Despite the increasing demand, orders placed with Uniphone are said to have fluctuated widely, peaking as high as 50,000 units a month and falling to as low as 5,000 units a month for much of last year.

Following its corporatisation in 1987, STM is said to have cancelled two major contracts for phone supply awarded by JTM (Business Times, September 11th 1989). The first was for a variation order of 615,000 phones awarded in 1985 to Uniphone, and the second for a M$61 million split contract for 2 million phones awarded in 1986 to both Uniphone and NEC of Japan. Only two contracts, both awarded to Uniphone, have thus far been brought to completion. The first is for 500,000 locally manufactured Siemens telephones supplied between 1977 and 1982, and the other for 1.04 million Bell Telephone Manufacturing (BTM) phones, supplied between 1982 and June 1989.

d) <u>Proposed Targets</u>

Mr. Manickam pointed out that STM's proposed targets are directly related to the growth rate of demand and market potential. Since STM is self-financing and self-funding, it has to set aside enough funds to meet the market demand. It is equally important that there are sufficient customers who require the services offered by STM. At the present, earning power is still relatively low, when compared to Singapore, for instance. Furthermore, as far as priorities are concerned, for some it is more important to have a car than to possess a telephone. Some houseowners may have to tighten their belts to pay off mortgages on their homes and therefore have to make do without a telephone.

e) New Value Added Services

This year alone, STM has introduced four new value-added services which are an indication of the company's seriousness in providing customers with services of international standards. The four services are Telita (Malaysia Videotext service), Maycis (Malaysia Circuit Switched Data Network), Telemail (Malaysia Public Electronic Messaging Service) and the Toll Free Service.

Telita is an interactive communications service. With a telephone, a simple keyboard attached to a television set (with adaptor) or a modem and personal computer, one can call up a host of information from different sources. A fully developed videotext network has many commercial applications such as home banking, home shopping, advertising, games, mail and ticket reservations. However, Telita is a long way from this and it comes as no surprise since this service has only met with limited success in developed countries.

Maycis is used for the switching of calls between data terminals and has been designed exclusively for data transmission. With the availability of this service, customers can now choose between five different forms of data communications services : Leased analogue lines (i.e dedicated high quality circuits with high transmission speeds), Data over Telephone Lines (Datel), the packet switch network (Maypac), Intelsat Business Service (IBS) and Maycis.

The technique employed for call connection in Maycis is a fast, reliable and efficient Stored-Programme-Controlled (SPC) data communication facility called circuit switching. Maycis is seen as filling the gap in data communication between analogue leased lines and Maypac. The distinct advantage of Maycis over existing leased lines is that it offers network management facilities for quick fault isolation and rectification. In leased lines, line failure is a major contributing factor to network downtime. Maycis has most of the characteristics of Maypac in terms of efficiency and reliability. In addition, it has facilities as yet unavailable on the Maypac system.

The market trial for Maycis services started in early 1988 and ended in April 1989. A total of 27 organizations including STM were involved, including data experts, electronic data processing (EDP) users, installation and maintenance staff and computer specialists. It was found that Maycis provides for superior performance in terms of quality and security compared with data communication over the telephone network, such as with the Data Over telephone Line (Datel) service and leased lines. Because Maycis allows data to be communicated directly between computer terminals on a separate network, it allows a congestion-free service, higher speed of transmission and results in less error rates compared with Datel. Compared with leased lines, Maycis provides better features and an additional 21 optional facilities and is both easier and faster to install.

The users of Maycis include those in the business sector, com-

prising mainly banks and financial institutions, government departments and manufacturing and multinational companies. According to Tan Sri Dr. Rashdan Baba the potential market for Maycis is expected to grow in tandem with the computer industry, at about 30% a year. The tariff structure for Maycis is as follows. STM charges a refundable deposit of M$500 and a M$150 connection fee for each connection regardless of distance. Five different user speeds will be offered and the monthly subscription fee for each will be M$100 (for 600bps); M$125 (1,200bps); M$250 (2,400bps); M$350 (4,600bps) and M$450 (9,600bps).

The Maycis network consists of a main exchange in Kuala Lumpur and eight nodes - two of the nodes will be located in Kuala Lumpur and one each in Subang Jaya, Kuantan, Johore Baru, Penang, Kota Kinabalu and Kuching, providing nationwide accessibility. The network uses Ericsson's AXB-30 stored programme controlled (SPC) data equipment supplied by Perwira Ericsson. It is understood that STM's investment in the infrastructural equipment runs into several million ringgit. At the moment, international linkage is not possible. However, should the demand for such a link arise, the Maycis data network can be connected to overseas circuit-switched networks using the Intelsat Business Service (IBS) on a shared user basis.

The network conforms to the CITT X-21 interface standard to match the network with the computer terminals of customers. STM uses Nixdorf equipment and has some 50 Kedai Telekom connections on the Maycis network since user trials began. In addition, STM has 200 Teletex connections nationwide on Maycis using software and equipment from Siemens.

Of the various data communication services offered by STM, there has been significant growth in the leased circuits, Datel and Maypac over the past few years, with total installation of the three services increasing from 8,457 in 1987 to 11,723 in 1988. Individually, leased circuits registered 8,206 connections in 1988, compared with 6,724 in 1987. Datel users more than doubled from 1,203 in 1987 to 2,687 in 1988 while Maypac subscribers grew from 530 at the end of 1987 to 840 in May 1989. Total revenue for data communication services in 1988 amounted to about M$56 million. This excludes Datel since its charges are included in the telephone network. However it includes Intelsat Business Services (IBS) and telefax, a low speed form of data transmission.

When asked to comment on STM's priorities in the provision of data communication services, STM's Executive Chairman Tan Sri Dr. Rashdan replied that apart from Digitaline, STM has no immediate plans for an additional data communications network. Digitaline is a high speed digital leased line facility presently undergoing a trial run and is to be implemented in 1990. STM is aware of the fact that as business operations become increasingly mobile, there may be a need for a dedicated mobile network for specialized use. This, however, is not likely to emerge as a public network but one for localized use. Tan Sri Dr. Rashdan envisions data communication moving in the direction of integration with text, image and voice such that there appears to be no distinc-

tion to the user. "Such a link-up, as encapsulated by the ISN concept, gives the best indication of where STM is heading", he added.

Telemail is a computer based electronic messaging service whereby users iteract with electronic mailboxes in the computer to store and retrieve messages. Commonly called electronic mail or e-mail, it covers person to person, intra-company, inter-company and the personal or corporate broadcast of messages. Telenet, the Viginia-based subsidiary of the US Sprint Company has been awarded a M$3 million 5-year contract to instal the Telemail network. Telenet was responsible for installing the network for the Maypac service some five years ago. Spectron, a domestic representative of Telenet, is the turnkey contractor for the Telemail project. The company supplied, installed and commissioned Telemail early this year.

STM plans to expand its Telemail service to include connections with Europe and Australia. Presently this service is only provided in Malaysia and the U.S. According to STM Executive Director, the 27 countries connected to STM's International Packet Switching Network are its target for Telemail. Countries connected to the system incldue Canada, Hong Kong, Japan, West Germany and the United Kingdom. Telemail was launched on a trial basis on June 15 this year. By the end of the year, STM hopes to have provided 180 mailboxes to 15 domestic subscribers. STM now has the capacity to provide 3,000 mailboxes. Since customer access to Telemail is currently through the Maypac network, the targeted customers for the Telemail service are those subscribing to Maypac. In future, access to Telemail will be via the Malaysian Circuit Switch Public Data Network.

According to Telenet International Programme Manager, Sharon Hurewitz, use of electronic mail services is expected to emerge as an important communication medium in the Asia Pacific region in the coming 10 years (Business Times, August 24th, 1989). Presently, electronic mail use has been generally slower in the region as a result of lack of access to personal computers. In Malaysia, however, the growth of personal computer usage, which averages between 20 and 25%, is said to augur well for electronic mail. The potential market size for Telemail is quite substantial even if it is conservatively estimated that 10% of the estimated 300,000 personal computer users in the country would become subscribers.

3.0 OTHER TELECOMMUNICATION SERVICES

a) Radio Paging

There are now 32 radio-paging companies in the country operating on not less than 5 frequencies. The total number of subscribers has increased rapidly in recent years from 8,000 in 1984 to 15,000 in 1988. Presently, there are over 25,000 radio-paging users in the country. However, Malaysia lags far behind most of the other countries in the region, especially Singapore which has 500,000 subscribers. Indonesia, the Philippines and Thailand have not less than 40,000 pager subscribers each. According to Haji Razif Abdullah, the Chairman of Cellular Technology (a radio-paging joint venture), there is vast potential in the Malaysian radio-paging industry. As the pace of business development increases, the demand for radio-paging is expected to grow concomitantly (Business Times, Agust 16th, 1989).

Cellular Technology, a local telecommunications firm, recently announced the formation of a joint venture with Ericsson Telecommunications on a paging operation. The new company, CT Paging, will be majority owned by Malaysians. The radio-paging service will start at the end of the year and will cover the Klang Valley. In the first phase of implementation, three transmitter base stations will be set up. US based Spectrum Communications & Electronics and Magnetic AB, a subsidiary of L.M. Ericsson in Sweden will supply the radio-paging system while the pagers will come from Ericsson Paging Systems of Holland. The paging system will be fully computerized, allowing automated direct paging with 3.2 bit microprocessor technology. According to the Chairmain of Cellular Technology, Ericsson was chosen as the partner because of its leadership in the telecommunications field and its proven performance in providing quality products and services worldwide. Spectrum and Magnetic are currently implementing a paging project in Taiwan, the largest ever paging system of 1.2 million subscriber capacity.

In early September 1989, a nationwide paging-system linking all paging operators in the country was launched. Titian Sebaran Sdn Bhd, Managing Director, Ungku Fadzil Abdullah said the M$1.3 million system, a first in Asia and the fourth worldwide, would enable all paging companies to offer nationwide paging services at a cheaper rate. Paging companies need pay only M$60,000 to link up with this service compared to M$300,000 to set up a localized paging centre. Currently, paging operators are limited to a 30km radius from the paging centre. The system using RTM's FM transmitters on the national broadcast (i.e the portion of the FM band width which is not taken up by normal radio transmission), will cover all the West Coast states, north Kelantan and Singapore. The service would be extended to cover the whole of Malaysia by March next year and will go world-wide by the end of 1991. Titian Sebaran, a wholly-owned bumiputera (indigenous, predominantly Malay) company has been issued a paging licence by the Energy, Telecommunications and Posts Ministry and has obtained the Information Ministry's approval to use RTM's FM subcarrier as transmitters.

Kontel, a subsidiary of Sapura Holdings and a local supplier of paging services, projects its total pager subscribers to increase between 30 to 40% by the end of this year, with the introduction of the Dial-Page. The Dial-Page pager which was developed entirely by local engineers is priced at M$545. By comparison, most numeric and alphanumeric pagers usually cost between M$600 and M$1,200. Dial-Page is considerably cheaper because it is manufactured locally with local components. Previously pagers were either imported or assembled by multinational companies.

Dial-Page was developed by Sapura's Research and Development Division. Currently, Sapura is the only Malaysian company which designs and installs a full-fledged, wide area paging system from the ground up. This ranges from the manufacture of the encoder unit (the heart of the system) to the installation of transmitters. It is also the only company to manufacture paging encoders in Malaysia and the only one to develop its own paging software. Dial-Page allows paging requests to be directly attended to without having to go through a conventional paging operator system regardless of whether the telephone utilizes rotary dial (Decadic signal) or touch-tone dial (DTMF). Furthermore, messages can be sent using public phones. Sales of the Dial-Page service has been very encouraging. In less than a month since its introduction in June 1989, some 600 customers had subscribed to the direct dial service (Business Times, July 19th 1989).

b) Trunked Radio System

With the introduction of the trunked radio system in mid August 1989, Malaysia now has four radio-based communication services; the other three systems available are paging, leased channels and the ATUR mobile radio service. Trunked radio is a two-way communication system, similar to that used in taxis, but with more channels. The system will be provided by a consortium of three companies headed by Electcoms Sdn Bhd. The other partners are Koperasi Dermajaya Wanita and Ide Menang.

The consortium is the first of 14 private telecommunication companies grouped into 5 consortiums licensed by the Government to operate the trunked radio system. Each company is allowed to operate in a maximum of three states with one base station in each state. The five consortia are headed by Electcoms, CHRS and CT Communications in Peninsular Malaysia and Teratai and Yakin Perkasa in Sabah and Sarawak. These operators have been given a 12-month period from the time the licences were issued (i.e November 1988) to have their networks operational. The Ministry of Energy, Telecommunications and Posts has indicated that it would also consider applications from companies wanting to undertake the trunked radio system on a joint venture basis with foreign firms provided that the majority equity is held by bumiputeras.

Electcom's service operates on the 800 MHz frequency band (which allows for the highest number of channels) and uses equipment supplied by Minnesota-based E.F. Johnson. Electcoms Managing Director, Mr. B.K Ong, said that the company will make

"substantial" additional investments to enhance the network so as to provide wide area coverage (Business Times, August 16th 1989). So far, the company has invested about M$5 million to establish base stations for the basic trunk network. In its basic form, the network's 50 watt transmitters will allow coverage within a 30km radius of a base station. Electcoms, however, plans to progressively install American switching equipment at its base stations so as to allow subscribers to be continually in touch over wide distances between base stations. Wide area coverage will initially be made available together with the basic trunked radio system in the Kuala Lumpur and Klang Valley areas. This will be extended to Seremban, Ipoh, Penang and Johore Baru in line with the proposed nationwide coverage.

4.0 AIRWAVE MANAGEMENT

With respect to airwave management, Malaysia is expected to have a modern and better radio frequency management and monitoring system by the end of next year. Guidelines on radio frequency usage are due to be announced this year in preparation for the phasing in of the new airwaves management system. The new system is estimated to cost about M$25 million and will replace the current system which dates back to 1947 (Business Times, August 2nd 1989). The existing radio frequency management system needs to be upgraded in view of the rapid development of modern technologies and telecommunication needs which has in turn increased the demand for radio frequency spectrum both inside and outside the country. The upgrading of radio frequency management is part and parcel of the government's effort to equip inaccessible rural areas, especially in Sabah and Sarawak, with telecommunications facilities.

Under the first phase of the radio frequency management modernization plan, the Telecommunications Department conducted a study to identify the most suitable technique to manage airwaves. Spectrocan Engineering of Canada was appointed to conduct the study. The issues to be addressed in frequency management are allocation, assignment, allotment, coordination and proper monitoring of the radio spectrum. Canada's frequency management system has been chosen as a model for Malaysia and Spectrocan Engineering has been given full recognition by the government of Canada to export radio frequency management know-how. The study aims to identify Malaysia's current radio frequency spectrum management practices and the requirements for the implementation of the new system. The initial study was undertaken in February this year and the memorandum of understanding between Telekom and Spectrocan Engineering was signed in July.

Prior to implementation of the new radio frequency management system the Ministry of Energy, Telecommunications and Posts will have to consider suggestions made by the consultant and obtain funds needed for the implementation. Although the cost to establish the new system is high, the Sixth Malaysian Plan is probably an avenue for the Ministry to acquire the funds needed to implement the new system. The plan is to cover the period 1991-1995.

According to Spectrocan Engineering, radio frequency spectrum management in Malaysia is very rudimentary and the Jabatan Telekom Malaysia has an undermanned, resource poor core of spectrum regulators attempting to deal with increasing demands of a technology intensive medium but without the fundamental tools to do so. For example, JTM does not have:

i) an accumulated store of accurate information about its operational environment, enabling legislation and an effective mandate with which to operate and

ii) a structured and forward looking philosophy in terms of policies and objectives.

The privatisation of telecommunication services and equipment which JTM once managed is partly to be blamed for such inefficiency. JTM used to be a very large body where all spectrum related matters were encompassed. After privatisation, the department was left without sufficient human or material resources even though it had been given the mandate to regulate telecommunications. Spectrocan Engineering has recommended that the Malaysian Government make the necessary corporate commitment to apply corrective measures to enable the positive management of radio frequency spectrum. These corrective measures should incorporate the installation of the International Telecommunications Union building blocks indentified as necessary to a frequency management unit.

5.0 NATIONAL TELECOMMUNICATION POLICY

The Energy, Telecommunications and Posts Ministry plans to formulate a National Telecommunications Policy (NTP) to focus on how information and telecommunication technologies can help boost the growth of the country (Business Times July 26th, 1989). The Minister, Datuk Seri Samy Vellu, revealed that a special committee set up by the Ministry is completing the final draft of the policy which will be submitted to Cabinet soon. He added that a policy on national telecommunications is needed in view of the increasing importance of telecommunications and information technology in the development of the country.

Under the policy, strategies for the adoption and assimilation of both technologies into manufacturing, broadcasting, plantation and service activities will be specified. The policy will also identify the manner in which the present base of electronics manufacturing expertise can be harnessed and upgraded into the core of a viable telecommunications equipment manufacturing subsector. Other matters being looked at include :

i) the role of the main network provider STM, in relation to private operating companies, particularly in the provision of value-added services;

ii) frequency management;

iii) the question of whether to encourage competition or monopolistic provision of services in the industry as a whole;

iv) the "grey area" of using satellite dishes for overseas transmission.

The policy will therefore define the development of the industry as a whole and involve all frquency users in the country such as the Department of Civil Aviation, STM, the Military Forces and the information systems users.

Although the Ministry is still at the stage of formulating the policy, informal discussions to improve the telecommunications system have been on-going. The whole system has been and will continue to be upgraded by providing more links and circuits not only in the country and to ASEAN but also throughout the world. For example, the earth satellite station in Kuantan will be complemented by a digital fibre optic submarine cable which will further improve the quality of international services. The Kuantan - Kota Kinabalu link is expected to be commissioned at the end of 1990. When completed, in conjuction with another link to either Manila or Hong Kong, it will give Malaysia wide access to USA and Japan, lucrative trans Pacific telecommunications markets and it will also be the first segment of the planned ASEAN optical submarine cable network.

6.0 IS TELECOMMUNICATIONS CONSIDERED A PRIORITY SECTOR ?

The development, allocation and estimated expenditure during the period 1981-1985 and the allocation for the period 1986-90 for telecommunications is summarized below. This information is sourced from the Fifth Malaysia Plan 1986-1990.

Fourth Plan Allocation (1981-85)	Estimated Expenditure (1981- 1985)	Fifth Plan Allocation (1986-90)
M$2,900.44 million	M$2,400.48 million	M$9,572.38 million

Malaysia's expenditure on its telecommunications infrastructure programme was the highest in the world between 1985 and 1987, according to Datuk Leo Moggie who is the former Energy, Telecommunications and Posts Minister and is currently the Works Minister (Business Times, August 16th 1989). The expenditure took about 17.1 per cent of the country's gross domestic product.

Although Malaysia's local telephone penetration (main telephone lines per 100 population) is still small compared with international standards, in recent years it has been increasing rapidly and is now among the highest in ASEAN after Singapore where telephone penetration is 33 per cent. Indonesia's telephone penetration is at 0.03 per cent and Thailand's is between 1.6 and 1.8 per cent. From 1979 till 1980, telephone penetration in Malaysia was only between 2.8 and 3 per cent. To date, the figure has risen to 7.1 per cent from 6.8 per cent last year. The world telephone penetration average is about 9.1 per cent. In terms of public phones Malaysia's telephone penetration is also catching up with 1.2 main public phone lines per 1,000 population compared with Singapore's 9.5 and Indonesia's 0.03 (Business Times, August 16th 1989).

Recently, Datuk Seri Samy Vellu announced a M$1.0 billion programme to provide at least one public telephone to every village (Star, July 21st 1989). Describing the programme as "costly but necessary Datuk Seri Samy Vellu said rural telecommunications would from now on be given top priority and will be implemented in stages as soon as possible. The planning division of STM is in the process of drawing up a master plan for the rural telecommunication service which will be incorporated in the company's 5 year business plan. The plan is expected to take between 3 and 6 months to complete (Star, August 3rd, 1989). The expenditure will fall under the rural telecommunication cabling project being drawn up by a special committee headed by the Ministry.

Plans are afoot to increase the allocation for rural telecommunication by 300 percent from the present M$5 million to M$20 million - i.e M$10 million from STM and M$10 million from the Finance Ministry. The time frame for the project, as originally announced will mean completion in over 100 years. This estimate is based on each village in the country having at least one phone. In Mr. Manickam's opinion, however, the yearly allocation of M$20 million for the rural telecommunications project is "just

a drop in the ocean". He added that to provide two to three out of every ten households in the rural areas with a telephone would require an estimated M$1.5 billion. To do a decent job, STM would have to spend more than M$50 million per year, an amount which STM is prepared to write off since the project is basically a "financial non-starter" as the Chairman of STM puts it.

Presently, rural telecommunications is catered to by cellular mobile phones, the multi-access radio system and the conventional high frequency radio call system. New means of communication, such as the use of microwave dishes, are being considered as the cost of pulling conventional cables over rural terrain is high. Given the country's relatively small size and terrain, a combination of both switching and radio transmission would probably be an ideal way to undertake an essentially unprofitable venture as economically as possible (Business Times, October 2nd 1989). Other possibilities, as suggested by Mr. Roger Petit-Jean of Alcatel CIT, include setting up remote concentrators of the main urban switch. Alcatel CIT has been involved in rural projects in a number of countries including French Polynesia, Malta and Mauritius. The company has developed its own integrated switching - cum radio rural system, known as Rurtel. The Government has indicated that it may seek Canada's help to improve telecommunication facilities in rural areas, especially in radio reception (Star, October 12th, 1989).

7.0 STRENGTH OF MAJOR COMPETITORS

The market leaders in the Malaysian telecommunications sector are Japan, Sweden and Germany. The strength of these competitors particularly the Japanese companies, is attributed to the following factors :

i) Presence

According to Mr. Manickam, presence is one of the most important factors influencing the success of Japanese companies in Malaysia. Most of the Japanese telecommunication companies maintain a regional office in Kuala Lumpur and employ officers whose sole function is to probe the market to determine what the market demands are. Thus these companies are able to plan ahead long before projects are announced in the newspapers. With sufficient preparatory work, the uncertainties associated with a particular project can be reduced significantly. Consequently, these companies can provide very competitive prices. Since these companies know the sort of figures they should be quoting, they know exactly how much they can afford to trim off in their bids instead of offering unrealistically low bids.

ii) Pricing

Japanese telecommunication products are priced very competitively. As Mr. Manickam puts it, "The Japanese are here to protect their market".

iii) Preferential Treatment Accorded to Japanese Companies

Mr. Manickam confesses that the Japanese get preferential treatment from the Government which makes it considerably easier for a Japanese to gain access to Government officials and agencies. For example, if a Japanese investor turns up unexpectedly and requests to see an important government official, a meeting can be arranged on the spot without much difficulty. However, a non-Japanese investor wishing to have an appointment with a government officials under similar circumstance would not be accorded this preferential treatment. Mr. Manickam believes that one of the reasons the Japanese have such a good rapport with Malaysian government officials is because the Malaysian Government does not wish to offend Japanese investors.

iv) Commitment and Willingness to Invest

Japanese companies are willing to spend money to maintain a strong presence in Malaysia - unlike some companies which enter the market only for a particular sale or what Mr. Manickam calls the "hit and run" companies.

v) Keeping in touch with Government officials and end users

The Japanese are very good at fostering and maintaining good working relationships. Japanese companies employ a very personal approach in their dealings with Government officials and end users. For instance, the managers of all the Japanese telecommunication companies in Malaysia know Mr. Manickam on a first-name basis.

8.0 COMPETITORS' MARKETING STRATEGIES

There are generally two approaches to competitors' marketing strategies, namely :

a) Achieve orders initially and then set up an office
b) Set up an office and underwrite costs initially and then work on obtaining orders.

The majority of Japanese companies employ marketing strategy (b). They are willing to invest in an office initially and underwrite the costs, make their presence felt, host functions, and work on achieving orders.

Japanese companies usually have a direct presence, i.e they establish a regional office in Malaysia as is the case with Nippon Telegraph and Telephone Corporation. Out of tradition, companies which do not have a regional office in Malaysia usually conduct business via a trading house, as is the case with Fujitsu Ltd which deal through the Japanese trading house Marubeni Corporation. Within the trading house there are several product specialists.

Recently French telecommunications firms have shown keen interest in expanding their business with Malaysia. A French Telecommunication Exhibition and Conference was held in Kuala Lumpur to increase the Malaysian public's awareness of the latest technology in telecommunications developed by France (Star, September 27th, 1989). The three-day conference and exhibition was jointly organized by France's Ministry of Posts, Telecommunications and Space, Director General of Communications (France Telecom), the French Technical, Industrial and Economic Co-operation Agency (Actim) and the French Embassy. Some of the leading French telecommunications companies that were represented at the seminar included Thomson, Alcatel, Telspace, Societe Anonyme de Telecommunication, Telecommunication Radioelectriques et Telephoniques and Matra Communications. The Heads of telecommunications departments of various countries in this region were invited to the conference, which was the second such conference organized by Actim in Malaysia.

France, which is losing market share in the Malaysian telecommunications industry to Japanese and Swedish companies, hopes that the outlook will change in the next two years. At a briefing for the press on the conference and exhibition, Mr. Michael Rosenberg, the Commercial Attache at the French Embassy, said "We consider this year as a crucial period for us. We start to build up greater efforts to capture a larger share of the market. (Business Times, September 13th 1989). Mr. Rosenberg, however, admitted that competition in the Malaysian telecommunications scene is very tough. Nevertheless several French telecommunications companies are seeking possible cooperation with local entities to promote their technology in this country in view of the fast development of the telecommunications industry.

According to Mr. Rosenberg, French telecommunications companies are strongly represented in the U.S.A, Africa, India and Singapore. Asia was only recently viewed as the area of growth for the country's telecommunications industry. Thus when the Malaysian economy was on the downturn, the country was not the main priority for investment by French companies. However, as Malaysia began to record growth after the recession, French companies became more interested in conducting business with Malaysia. This is evidenced by the increasing number of enquiries received from French businessmen wishing to expand their businesses in Malaysia, particularly in high technology industries. Previously French investments in Malaysia were confined to only pharmaceutical and consumer products but many now want to invest in electronics, gas and oil, power generation and information technology.

The French telecommunications sector generated a sales turnover of 38 billion Francs (M$15.5 billion) in 1988 and exported 25% of its products. Last year Asia was France's third biggest export market in telecommunications, representing 21% of its exports. Mr. Louis Lucas, the Export Manager of the Professional Association for the French Telecommunications Industry pointed out that France's competitive edge resides in the fact that the country was the first to introduce digital technology in 1970. France's telecommunications network has a 75% digitalisation rate which is the highest rate in the world. Furthermore, France Telecom, operator of all public communications networks in France, is the first operator in the world to offer the Integrated Services Digital Network (ISDN) on a commercial basis. According to Mr. Lucas, French companies want Malaysian partners to develop and manufacture digital systems in Malaysia and commercialise the telecommunications systems together.

In a recent Business Times report, French telecommunications leader Alcatel CIT announced that it has earmarked 1992 as a watershed year by which to make its presence felt in Malaysia (Business Times, October 2nd, 1989). This is because by 1992 STM's supply of telephone lines is expected to reach full capacity, paving the way for Alcatel to possibly partner STM in public switching. Discussions have been held with STM and Alcatel CIT is hopeful of a favourable response. According to Mr. Petit-Jean, the Senior Vice President (International Division) of Alcatel CIT, in the next 2 years the demand for telephone lines should outstrip supply. Presently there is excess capacity of some 55% out of a total of 2.8 million lines available. Projections by Alcatel CIT indicate that voice and data traffic is growing at about 10% a year. The projections are based on the growth of national income. However, Mr. Petit-Jean cautioned that experiences elsewhere in the world have consistently shown that projected figures in telecommunications are often overtaken by reality.

Alcatel CIT is the subsidiary of Alcatel France dealing in public switching and transmission. STM s present partners in public switching are L.M. Ericsson of Sweden and NEC of Japan, through their respective local subsidiaries Perwira Ericsson and Pernas NEC. At present, Alcatel's presence in Malaysia is limited to

the installation of digital microwave stations by its West German subsidiary, Standard Electrik Lorenz, and two distributors for its business communicators equipment. Mr. Petit-Jean feels Malaysia has enormous potential in telecommunications traffic as its present density of 8 telephones per 100 population is quite low. Telephone penetration in a country like Malaysia should be in the 30-40% range, he said.

Telic Alcatel, a leading European business systems supplier recently announced that it hopes to strengthen its position in the local office automation (OA) market which it views as being "very competitive yet sophisticated". The French company hopes to secure a 10% market share through its local distributor, Electra Communications. Mr. Le Batho, the Area Manager for Telic Alcatel, revealed that the company recently completed a market study charting the next three years of the Malaysian office automation market. He declined to give details of the study, adding that Telic Alcatel is nevertheless convinced that a strong market exists, albeit "an increasingly discerning one" (Business Times, October 2nd, 1989).

9.0 IS COMPETITION BASED ON PRICE ALONE ?

The answer to the above question is No. Apart from price, there are two other important factors, namely :

a) Technical Compliance - the equipment must meet specifications stipulated by STM

b) Lobby Power - ability of the company to convince the key decision makers that their product is the best one. This is related to maintenance of a strong presence in Malaysia.

10.0 TECHNOLOGY TRANSFER, TRAINING AND AFTER SALES SERVICE

Mr. Manickam of STM describes technology transfer and training as "one big hum-bug". In a call to "curb reliance on foreign technology", the Energy, Telecommunications and Posts Minister Datuk Seri Samy Vellu said that local investors must not place too much hope on promises made by foreign investors when told about their plans for technology transfer. According to Datuk Seri Samy Vellu, the majority of foreign investors use the promise of technology transfer as an opportunity to secure contracts. Furthermore, there are cases where technologies used are not suitable for application in this country and some which are already outdated in the country of origin (Business Times, September 27th, 1989). Mr. Manickam shared the same opinion when he claimed that promises of technology transfer are often used as bait.

Mr. Manickam stressed that any company wishing to sell their products or services here should commit themselves to some sort of technology transfer as a matter of principle or strategy. In reality, the extent of technology transfer is always negotiable. Nevertheless, the Japanese have played the technology transfer issue very well, according to Mr. Manickam. Mr. Manickam added that the Japanese companies are very good at promising heaven and earth and yet, in the final analysis, very little in terms of technology transfer is delivered.

11.0 COUNTERTRADE REQUIREMENT

Generally, there is a counter trade requirement for imports of telecommunications equipment unless the amount of the order is less than M$0.5 million. The countertrade requirement is usually spelled out in the tender. The Government sets out the countertrade requirements for companies such as STM and other government departments but not for companies in the private sector. Mr. Manickam pointed out that although STM is now self-funding and self-financing, the government still plays a major role in decision-making, particularly in purchases of equipment. For example, the approval of the Ministry of Finance is required for purchases above M$5 million. Government approval is also required in other matters such as adjustments in service tariff rates.

12.0 IMPORT TARIFF STRUCTURE

Presently all items imported by STM are exempt from import duties. However, as of 1990 all imported items will be subject to import duties ranging from between 30 to 35 per cent. Mr. Manickam pointed out that 50% of STM's capital equipment is imported. As such STM is under tremendous pressure to perform well since the same equipment will cost 30-35% more as of next year.

Regarding preferential tariff systems, to the best of Mr. Manickam's knowledge this does not exists and he believes there is no intention by the Government to introduce such a system. However, since the introduction of import tariffs is a new issue altogether, the Government may adopt a preferential tariff system later on. Preferential arrangements do apply in some other sectors.

13.0 INTERVIEW WITH STM CONTACTS

a) Background on STM's Current Status

Mr. Manickam provided some background on STM's current status by revealing that STM is going through a difficult time with its contractors. For example, a three year contract for the supply of microwave equipment was signed in 1985. Although the contract has expired, STM has maintained the same contractors because it has not been able to accept the required amount of equipment as agreed upon in the contract. It is not known how long STM will take to fulfill the microwave contract.

According to Mr. Manickam a large number of contracts were either written or signed during the 1983 - 1984 period, when the Malaysian economy was undergoing a boom. Projected needs and requirements were made with the assumption that growth of the economy would remain high for several more years. However, the economy took a downturn instead, particularly during the 1985 - 1986 period. Thus STM is still struggling to provide its contractors with sufficient orders. Presently, at least 6 major contractors are trying to get sufficient orders from STM.

One of the main problems that STM is currently facing is that the supply of services far exceeds the demand. This has been the case, according to Mr. Manickam, for at least the past four to five years. Although there now seems to be a slight change in trend, STM still has excess capacity. For example, in the case of local network area (i.e cables under the ground), there is a 100% spare capacity in certain areas. STM signed up with four local turnkey contractors about 4-5 years ago, to lay the cables under the ground. To date, STM has fulfilled the orders for only one out of the four contractors - the other three contractors have been extending their contracts with STM following the expiry of their respective contractual agreements. The exchange area, on the other hand has about 90% spare capacity. Mr. Manickam attributes the excessive spare capacity to over-ambitious planning by STM and the unexpected slow down in the economy.

Mr. Manickam pointed out that by next year, STM may have to start planning ahead and think about the direction the company needs to take in order to expand its services. Since two years lead time is required to plan ahead, STM is under increasing pressure to start planning on its expansion programmes soon. Both Mr. D'Cruz, the General Manager of the Long Lines Division, and Mr. Manickam commented that at least 80% of STM's plans in the next few years will be "more of the same, under the same contracts". In fact, 90% of STM's total capital expenditure is spent in the following three areas : exchange equipment, transmission equipment and local cables.

The main supplies of exchange equipment are Ericsson of Sweden and NEC of Japan. In the case of transmission equipment, the leading suppliers are Standard Electric Lorenz of Germany, Fujitsu of Japan and NEC of Japan. Mr. Manickam revealed that STM's new capital expenditure ranges from M$600 to M$800 million per annum. However, a large proportion (i.e about 80%) of the total capital expenditure is already committed through previously signed contracts. For example, the long lines and exchange contracts which are both 10 year contracts were signed in 1981 and will not expire until 1991. Furthermore, even though the contract is for 10 years, if STM is unable to take up the capacity agreed upon in the contract by 1991, the contract will most likely be extended - as has been the case with the supply of microwave equipment.

The biggest growth area, Mr. Manickam pointed out, is mobile phones. In March this year, Ericsson Telecommunications was awarded the contract for Malaysia's second cellular mobile phone network, a 900 MHz system (ART 900) using the Total Access Communications System (TACS). Three other major telecommunications suppliers who submitted their bids for the project were Nokia, Motorola and Fujitsu. Ericsson apparently submitted three separate bids compatible with the three internationally acceptable standards for mobile cellular systems, namely the UK based Total Access Communications System (TACS), the US based Advanced Mobile Phone System (AMPS) and the Nordic Mobile Telephone (NMT).

Under the 5 year contract, Ericsson will supply and install the network which will be operated by STM Cellular Communications (Celcom), a joint venture company between STM and the Fleet Group. The initial phase of the contract, valued at M$3.65 million, involved installation of the network on a semi-turnkey basis with supervision from Ericsson. Under the first phase, a total of 19 base stations will be set up - 14 in the Klang Valley area and 5 in Johore. The next phase will begin in March 1990, when the system will be expanded to cover the west coast of Peninsular Malaysia. By 1992, the whole of Malaysia is expected to be covered and by then, total subscribers are expected to total 83,000. ART 900 was given a soft launch on August 21st and within its first month of operation it attracted some 1800 subscribers (Business Times, September 19th, 1989). By the end of 1990, Celcom expected to have a total of 7,000 subscribers.

Phone vendors, in turn, are enjoying a boom in sales - particularly those which have taken the initiative to launch new

models. For example, Motorola and Ericsson recently introduced pocket-sized mobile phones for the first time in Malaysia. To date, JTM has type approved 14 models of mobile telephone supplied by eight vendors. Of these, 10 are hand held portables, two transportable and two car mobile. Among the vendors, Rank O'Connor will supply Nokia equipment, while the others are Antah Helco Trading (Mitsubishi), Matsushita Sales and Service (Panasonic), NEC Sales (NEC), Federal Telecommunications (Motorola), Sapura Holdings (Sapura SA) and Ericsson Telecommunications.

The software used by Celcom for the ART 900 network is a M$1.2 million system called Communication, Administration and Billing System (CABS). This was obtained under copyright from the UK based Sema Group. The 5000 line capacity ART 900 network offers better quality reception than the existing 450 MHz ATUR system. This is because it is based on a series of smaller cells which have lower range but allows clearer transmission quality as it uses a larger number of base stations. This feature makes the 900 MHz system particulary suitable for use in urban areas. The 450 MHz ATUR system on the other hand is expected to remain popular among rural subscribers such as timber companies and fishing trawlers, by virture of its long range.

Very recently, STM officially announced the country's third mobile phone service, ATUR 800, based on the Advanced Mobile Phone Systems (AMPS) (Business Times, September 13th 1989). Tender specifications for the project have been issued and it is understood that a decision will be made soon. STM has targetted nationwide coverage of the proposed ATUR 800 beginning April or May 1990 (Business Times August 18th, 1989).

A major portion of the investment in the AMPS network will go towards installation of new base stations in urban areas to facilitate nationwide coverage It is believed that 20 base stations will be installed in the Klang Valley, 12 in Johore Baru and 2 or 3 in each major town in Peninsular Malaysia, Sabah and Sarawak. No new licence from the Government is required for STM to undertake the project. This is because its current operating licence stipulates mobile cellular telephones as one of its areas of business. However the question of frequency has to be approved by the industry regulator, JTM.

STM's move to operate two mobile phone systems of its own is believed to be motivated by a desire to fully tap the phenomental growth experienced by mobile telephones in Malaysia and worldwide. For example, the ATUR 450 network increased by 59% between 1987 and 1988 and recently received a much needed 150% caacity expansion. In a move to accommodate the growing mobile phone market, STM recently established an autonomous mobile phone unit which emphasizes both the marketing and engineering aspects of mobile telephones. The unit was originally incorporated within the longlines division.

b) Canadian Share of Telecommunication Market

Both Mr. D'Cruz and Mr. Manickam estimated Canada's current share of the telecommunications market at less than 5% per annum. Canada's share has apparently improved slightly over the past couple of years and previously its share was lower. The two main areas of involvement by Canadian companies are :

i) Development of CASS by Bell Canada International
ii) Supplier of main distribution frames (MDF) by Northern Telecom

Apart from the two areas listed above, Canadian involvement in the Malaysian telecommunications market has been minimal. The Japanese are the dominant players in this market - they are very committed to the Malaysian market and they are willing to defend and protect their share of the market. Japanese companies are willing to invest; they have a permanent presence here; and they are willing to conduct feasibility studies or pilot projects, often at no cost to STM. For instance, NEC and Fujitsu are already ahead in achieving market entry for the ISDN project by conducting the pilot project. However there is still some scope for Canadian involvement in the ISDN project since STM is not committed to the three companies which have been selected to undertake the pilot project. Mr. Manickam pointed out that Canadian companies interested in participating in the ISDN project would have to come in quickly and lobby hard.

c) Potential Areas For Canadian Involvement

i) Computerization and Automation

Canadian companies have played a big role in the supply of computerization programmes. Bell Canada International (BCI) helped develop the CASS system (Customer Automated Services System) for STM to improve the quality of service. The total project value of the CASS system is about M$200 million, a large proportion of which is in the hardware. The consultancy services provided by BCI is part of the entire package.

With the CASS system, it is now possible to have a phone installed in two days. All house addresses can be stored in the computer data bank. On application, the computer can detect whether lines are available for a particular location and how they can be connected. Subsequently, information on when the telephone is installed, how often it is used and whether bills have been paid can be monitored. CASS is presently being tested in four major exchanges in Kuala Lumpur, i.e Subang Jaya, Sungai Way, Kelana Jaya and Taman Tun Dr. Ismail. STM expects the system to go nationwide for its 530 exchanges in the next three years.

Mr. Manickam pointed out that computerization and automation is one of the new areas where there is no long term committment with any one contractor or supplier. He added that it is difficult to predict the demand for computerization and automation since its a

case of "as and when the need for a new computerization programme arises, STM will call for tenders". He revealed that some of the hardware for STM's computerization requirements have not been committed yet - and therefore this is one potential area where Canadian companies could participate.

ii) Long Distance (Intercity) Optic Fibres

The long distance optic fibres project is worth an estimated M$100 million, according to Mr. Manickam. Although this is subject to confirmation, it is understood that the planning stage is due to begin sometime in the near future. STM already has optic fibres (supplied by Fujitsu) laid but only in urban areas. As part of its expansion programme, STM is planning on establishing long distance or intercity fibre optics links.

Mr. Manickam suggests that the Canadian telcommunications companies seeking market entry could, for instance, offer to conduct a feasibility study for long distance fibre optics linking the entire country. He emphasized that such a feasibility study could be done immediately. The two main advantages for the company carrying out the feasibility study are :

- the company would be able to ascertain what STM's assets (in terms of equipment, facilities, etc) are: and

- the company would be able to determine how long the existing capacity will last.

Furthermore, the company conducting the study will be able to make recommendations that would put them at an advantage over other potential bidders. Mr. Manickam cited as an exampled the Integrated Services Digital Network (ISDN) pilot project which STM is currently conducting with the assistance of NEC, Ericsson and Fujitsu. Although STM has made it clear that new tenders will be called at the end of the two year pilot project and that the tenders will be extended beyond NEC, Ericsson and Fujitsu, these three companies would probably be the strongest contenders to undertake the commercial project.

iii) Digital Cross-Connect Network For Leased Circuits

This project which involves the upgrading of leased circuits is expected to cost between M$5 - M$10 million. STM currently has 9,600 leased circuits but because the present system uses switch traffic, it is not well managed or monitored. STM is seeking to improve its leased circuit business, which at the moment constitutes about 3% of total earnings (or about M$30 million per annum). With the present system, STM is unable to monitor any breakdown in service. In other words, customers have to call up STM to inform them that the leased circuit is out of order.

The main subscribers to leased circuits are business companies. Mr. Manickam foresees significant growth in this business, particularly if the network is upgraded so that STM can provide a more reliable and efficient service. At the moment, the leased circuit business is growing at 18% per annum Mr. Manickam said

that customers like the idea that they have their own circuit and will therefore be willing to pay for a leased circuit, especially if they are heavy users of telecommunications.

iv) Total Network Management

The estimated expenditure for total network management which includes software, hardware and consultancy services is around M$30 million. Mr. D'Cruz describes the total network management programme as "a means to provide a better service rather that a service itself".

v) Integrated Services Digital Network (ISDN)

Described as the "wave of the future", ISDN is an enhanced digitalized, switched network which allows voice, data, text and video communications on the same network. Such a sytem is already in use in West Germany, France, Japan, USA and Singapore. Its obvious advantage is that it allows subscribers to use digital telephones, high speed transmission and multi-media terminals. STM launched an ISDN pilot project in July this year and hopes to offer fully commercialized ISDN services by 1993 (Business Times, July 21st 1988). Bidding for the contract will be on an open competitive basis. Tenders will be called at the end of the two year pilot project.

STM's pilot project makes Malaysia the second ASEAN country after Singapore to implement ISDN field trials. The project will comprise a total of 200 lines at 3 exchanges in the Klang Valley, namely Bangsar (50 lines to be installed by Perwira Ericsson), Shah Alam (50 lines to be installed by Fujitsu Ltd) and Kuala Lumpur (100 lines to be installed by Pernas NEC). The company will use their leading digital switching equipment for the project, the AXE 10, Fetex 150 and NEAX 61 respectively.

Both Perwira Ericsson and Pernas NEC are presently the main suppliers of Malaysia's switching exchanges, which is already 70% digitalized. To date, Ericsson has supplied a total of 60 AXE 10 exchanges involving 850,000 lines, while Pernas NEC has installed 270 NEAX 61 exchanges involving 1.2 million lines.

The ISDN pilot project is expected to cost the three companies an initial investment of about M$7.0 million of which software will account for an estimated 70% and hardware the remaining 30%. STM will not incur any cost, except manpower training, until the project is commercialized and the contract awarded.

The project will initially be limited to Kuala Lumpur and the Klang Valley, with later extensions to Penang and Johore Baru. The business sector is expected to be the main market for the new network, which will be implemented in four phases from the middle of next year. Phase I of the project will involve setting up the system and a market survey of users' needs. During Phase II the various exchanges will be connected using common channel signalling. In Phase III, the system will be connected to STM's data communications networks, Maypac and Maycis. Finally, in Phase IV, STM and the three companies will develop the necessary user

software inferfaces for telex and data bases.

The tariff structure for ISDN has been finalized and will be presented to JTM, the regulatory body, soon. Past experience in other countries has show that a higher user demand corresponds with lower charges and terminal costs. Mr. Motojiro Shiromizu, the Executive Director of Fujitsu Ltd maintains that the single most important factor which will determine the success of ISDN in Malaysia is the tariff rate levied. The structuring of tariffs has equally been a problem for the telecommunications authorities of other countries which have implemented ISDN either on a trial or commercial basis. Many have become increasingly aware that a viable market for the service will only arise if services can be priced inexpensively enough to attract customers.

Malaysia's ISDN will offer services at speeds of between 64k bits and 1.2m bits. Although this will not allow the much-touted video conferencing facility, services such as 3-second G4 facsimile transmission, digital telephone and teletext services will be included. Mr. Manickam describes the ISDN project as a "small bang project that grows in a big way", as opposed to a "big bang small sized project". The ISDN project may not be fully implemented for 5 years and he estimates that it would be worth up to M$1.0 billion. He added that STM feels obliged to provide services such as ISDN in order to safeguard its image. It is under tremendous pressure from multinational companies who have been "spoilt" by the availability of such services in their home countries.

d) Major Competitors

Country	Percentage of Market Share	Equipment/Services Supplied
1. Japan	50%	Satellite stations, optic fibres transmission equipment, pulse code modulators, digital transmission equipment, computer main frames, submarine cable, etc.
2. Sweden	15%	transmission equipment
3. Germany	10%	transmission equipment
4. U.S.A 5. U.K 6. Australia	5%	From USA - packet switching, telemail
7. Malaysia	20%	Cables

Of the total annual capital expenditure of M$800 million, STM spends between M$200 to M$300 million on locally sourced services (i.e civil works) and equipment, such as buildings, roads an other infrastructure. Most of the cables used by STM are sourced

locally. In fact, STM has in stock M$200 million worth of cables. Not surprisingly, it has stopped buying cables for a while and consequently some of the local cable manufacturers have since closed down.

Mr. D Cruz and Mr. Manickam described the current status of Canadian exports in telecommunication products and services as small but expanding.

Listed below are products or services for which there are good market prospects for Canada.

Immediate

i) Mobile Phone Network
ii) Total Network Management
iii) Information System/Computerization

Not immediate but good potential of coming onstream in the next 3 to 5 years

i) Long Distance (Intercity) Optic Fibres
ii) Digital Cross-Connect Leased Circuits
iii) ISDN

e) Closing Comments

Mr. Manickam pointed out that STM has gone through a lot of belt tightening measures in the past two years. It's financial performance during it's first year of operation as a corporation has not been good as a result of huge long term debts, high operating costs, high level of spare capacity, etc. However last year STM's financial performance improved significantly and Mr. Manickam predicts that the company may see even better profits this financial year. Thus there is a general feeling of optimism and STM now believes that it can afford to loosen its belt slightly and prepare for modernization and growth. Part of the modernization will involve the conversion from analogue. Other modernization programmes, such as the introduction of ISDN may be accelerated as STM gains more confidence in its financial performance.

APPENDIX A

PRINCIPAL CONTACTS

I) Principal Contacts for this Study

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APPENDIX B

"Privatization : Telekom Copes with Enterprise"

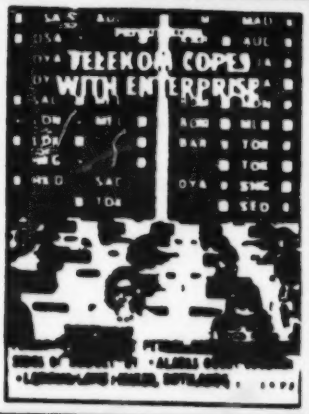
Malaysian Business
November 16th, 1988.

PRIVATIZATION

TELEKOM COPES WITH ENTERPRISE

PUBLIC expectations of Syarikat Telekom Malaysia soared when the lumbering government giant turned sleek private animal last January. But in the ensuing months, the expected top-notch efficiency did not come. STM also turned in a loss-making first year of trading. But the disappointing performance was not because the new helmsmen were not performing. In shedding its government cloak, STM found itself with inherited inefficiencies and new pressures. It had to grapple with unpaid bills, debts, high stock levels, excess telephone lines capacity and, the 28,000 workers who overnight crossed over from public to private but harboured public servant mentality. Not only had STM to re-orientate its staff, it had also to structure itself into a marketing company bent on promoting and upgrading its services.

It was only recently that changes by STM became recognised. Besides the one-stop *kedai telekom*, there is the emphasised 'go to the customer' approach, flexible policy regarding corporate rates and a batch of telecommunications surprises due to be introduced in the name of serving the customer better. Staffer Ngam Su May reports on the transformed STM which is just beginning to live up to the call to perform.



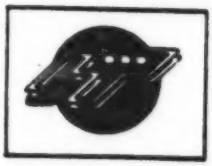
SYARIKAT TELEKOM MALAYSIA

LIVING UP TO PROMISE OF PRIVATIZATION

STM, the first public body to go private, feels acutely the pressure to perform. After a lot of painful grappling with inherited malaises, it is beginning to see the light at the end of the tunnel.

PRIVATIZATION is increasingly being espoused by many governments as *the* formula to convert inefficiently managed public corporations into dynamic, cost-efficient private entities. In theory, the government gets *paid* for its assets and saves on manpower, while the private sector enjoys more opportunities to make profits. The consumer will benefit from efficient management and receive better quality and value-for-money services.

In reality, it doesn't always work out this way. Still, the pressure on the management of a privatised concern to perform and show, in the shortest possible time, that privatization pays is most earnest. Last January, the country's telecommunications service under Jabatan Telekom Malaysia (JTM) became the first public sector organisation to take on the new clothes of a commercialised company under the name Syarikat Telekom Malaysia Berhad (STM). Now, after a disappointing maiden performance revealed in its first annual report released only in October, a lot of questions are being asked: why STM is not up to mark, and when, if ever, can it go public?



In coping with privatization, STM's new helmsmen, notably chairman Tan Sri Dato' Dr Mohd Rashdan Baba and executive director Dr Syed Hussein Mohamed, have to grapple with inherited inefficiencies and new pressures. Like a stepfather who must groom a child brought up by someone else into a mature and model citizen, one has first to correct the long tolerated bad habits and foster a new code of behaviour to ensure healthy growth.

LARGE PROVISIONS The stamp of private enterprise is most evident in the revaluation of STM's financial status. In the 1985 company accounts, the company was sized up using commercial accounting practices. This meant having large provisions for extraordinary items amounting to nearly 102 million ringgit. The items comprise the understatement of fixed assets, underprovision for stock obsolescence, underprovisions for doubtful debts, underprovision for pension and gratuity, and other net underprovisions and write-offs. After these provisions, STM's pre-tax profit of 4.9 million ringgit was negated with a net loss of 96.6 million ringgit.

RASHDAN. Grappling with a problematic 'stepchild'

last year.

STM's huge asset base of 7 billion may look impressive. But it belies the fact there is excess capacity in its subscriber network. The latter refers to cable pairs under the ground that link telephone lines to exchanges. Last year, the subscriber network with a net book value of 2.7 billion rgt, accounted for about 40 per cent of STM's fixed assets. Syed Hussein says the network can cater to 2.4 million lines. But there are presently only 1.2 million subscribers. This means operating at half capacity.

Syed Hussein explains that excess capacity results when one plans for the very long-term, 15 to 20 years, to meet future demand for telephones. The problem is that projection is not an accurate science that matches supply with demand. 'In some areas, we hit the target; in others, we don't.'

CAPITAL EXPENDITURE. The excess capacity together with the high level of stocks — cables and wires alone came to a whopping 263 million rgt — have led to the decision to reduce capital expenditure in the coming years. There was a time, Syed Hussein recalls, when there was a massive programme to work on service on demand, involving extensive infrastructure, switches and long lines (trunk lines for outstation calls). Capital expenditure averaged one billion rgt per year. 'Now that assets are high but utilisation low, the approach in spending is based on return on investment,' he says. He estimates capital expenditure to hover around 700 million rgt this year.

Perhaps the most difficult part of turning private is handling 28,000 employees who, overnight, crossed the line from the public to the private sector. Top management had the most trying time when the National Union of Telekom Employees (Nute) came on the verge of issuing strike ballots to demand payment of two months bonus early this year. In May, just before Hari Raya, STM paid 18 million rgt in advance salary. This was on condition that the advance would be deducted from future bonus. However, with losses of 96.6 million rgt last year, no bonus was declared this year. Syed Hussein reveals that the management has decided not to deduct the advance from the salaries as yet. 'We are differing until the 1988 results.' Union members are obviously relieved. But many are not happy about their company's cost-cutting measures that has cut overtime and reduced travelling expenses. The union is believed to be drawing up proposals for a new collective agreement.

If one looks at revenue per employee, STM is evidently overstaffed. However the management policy is 'not to reduce staff but expand business'.

But the long-term fear is they may lose their jobs after the five-year moratorium on retrenchment. If one looks at revenue per employee, STM is evidently overstaffed. But Syed Hussein reaffirms that the management policy is 'not to reduce staff but expand business'.

Initially, the bringing in of new blood at the directors' level did disturb the status quo. Last November, former managing director Daud Isahak resigned in protest against the appointment of outsiders. The urgent need for new skills led to the taking in of computer personnel, mainly system analysts, into the fold. Rumours were later spread that STM had taken in expatriates.

FIXED ASSETS OF STM
(Year ended Dec 31, 1987)

	At cost '000 rgt	Accumulated depreciation '000 rgt	Net book value '000 rgt	Depreciation charge for the year '000 rgt
Telecommunication plant				
— Switching	1,303,701	106,479	1,197,222	106,479
— Subscribers' network	3,000,703	250,124	2,750,579	250,124
— Long lines	858,979	38,436	800,543	38,436
External	218,464	15,000	203,464	15,000
	5,381,847	430,029	4,951,818	430,029
Movable plant	43,640	14,623	29,017	14,998
Other property and equipment	23,093	3,553	19,538	3,540
Land	55,443	1,000	54,443	1,000
Buildings	910,775	35,045	875,730	35,045
	6,414,798	484,252	5,930,546	484,212
Capital work in progress	868,721	—	868,721	
	7,283,519	484,252	6,799,267	

But Syed Hussein assures that STM is 100 per cent run in-house by Malaysians.

He thinks that after a period of anxiety, there is now a clearer sense of direction and better morale among the employees. They have been encouraged to be forward looking and view their jobs as careers where reward is based on merit. 'Their performance is no longer gauged as the performance of the entire civil service as a whole, where a clerk of the same level gets the same pay regardless of which department he is in.'

As for improving productivity, Syed Hussein admits that at one time there was the push pressure of a private sector environment. 'But we realise that they have to adapt to the pace,' he explains. There has been emphasis on re-training. 'In the past, it was centred on skills like installation or repair. Now it is a total commercial approach that stresses on sales, costs, marketing and profits.'

MARKETING COMPANY. Marketing and customer relations is a whole new horizon for the former government department. 'We have to structure ourselves as a marketing company,' says Syed Hussein. STM has yet to set up a full-fledged marketing division but a recent recruitment advertisement in the papers for marketing and sales executives shows that it is moving in this direction. It intends to spread its network of *Kedai Telekom* as retail outlets to 'sell' STM services.

Syed Hussein points out that the first step is expanding its customer base with aggressive promotions and advertising. Since it has excess line capacity, it has to get more people to install telephones. Residential and business telephones being its core business. 84 per cent of revenue comes from this source. There is room to grow as Malaysia's per capita phone ratio is small at 7 per 100. This year, public would have noticed STM staff manning booths in shopping complexes, new residential areas and even the pasar malam to entice people to apply for phones.

And it can boast now of installing a phone in a week — much quicker than it could before as a government entity. Its more personalised approach in marketing has already made an impact on some business clients (see accompanying story). Here, STM plans to have account executives to serve large individual clients, to see to their every telecommunication need. Having a phone is one thing, but using it is another. This is why STM is also drawing up plans to encourage people to call their friends and relatives locally and abroad.

SELLING STM through Kedai Telekom: One stop centre for wide range of services

SYED Hussein. Structuring STM as a marketing company

NUMBER OF SUBSCRIBERS AUG 31, 1988

Area	Direct line
SABAH	80,273
SARAWAK	89,916
Johor	135,830
Melaka	35,160
N Sembilan	42,782
SOUTH	213,772
Selangor	219,344
Fed Territory	215,810
CENTRAL	435,154
Kelantan	27,857
Pahang	38,719
Terengganu	21,821
EAST	88,397
Kedah	42,992
Perak	130,630
Perlis	7,708
Penang	113,888
NORTH	295,238
MALAYSIA	1,202,750

PUBLIC payphones. Striving to meet needs of the public

more often.

At the same time, it has to work hard to reduce the number of customer complaints. 'There is an average of every customer complaining once a year,' discloses Syed Hussein. That is a lot of complaints. The three main areas are breakdowns, billing and operator service. Letters to the press on excessive billings get a fair share of the headlines. More so when STM turned tough on those who skipped paying bills by disconnecting their phone lines. Many have cried foul that not only were their lines cut but they had to pay 50 rgt to have them reconnected after settling their dues. But these measures to improve cash flow have proved effective, drastically reducing trade debtors from 662 million rgt in 1986 to 362 million last year.

Reflecting a more progressive management, STM has invested heavily on computerisation to improve quality of service. One innovation is the customer automated services (Cass) system, developed by STM and Bell Canada. With this, it is possible to have a telephone installed in two days. All house addresses would be stored in the computer data bank. On application, the computer can detect whether lines are available for a particular location and how they can be connected. Subsequently, information on when the telephone is installed, how often it is used and whether bills have been paid can be monitored. Cass is presently being tried out in Subang Jaya, Sungei Way, Kelana Jaya and Taman Tun Dr Ismail. STM expects the system to go nationwide for its 530 exchanges in the next three years.

To repair technical faults, STM plans to install an automated management system which can monitor faults from a central station. This will cut down on complaints and reduce house calls for repairs.

GOING PUBLIC. With the installation of its strategies it looks as if STM is set on overcoming its inherited malaises and on moving on to establish a track record of enterprise and profitability. Despite the dismal results of 1987, STM is reasonably confident it has already transformed the company structurally — drawing on the expertise of two consultancy firms — for what needs to be done.

STM has an objective of going public. This it can only achieve after showing a profits track record of a minimum three years. For 1988 it has forecast profits of 52 million rgt, based on what it achieved at half-year of 26 million rgt pre-tax (unaudited). This means 1991 is the earliest date and there is confidence this is in sight.

'If profits in 1988 are not better than 1987, then something is really wrong,' hints Syed Hussein. It's not likely anything of this sort will go wrong. Insiders say STM's work in transforming its management and operations is going extremely well with consultants Arthur D Little and Hays Management. If something does go wrong, the wits say, it would be a case of STM 'doing little and being hay-wired.'

THE MARKET

WINNING OVER CORPORATE CLIENTS

While STM has made life better for the business community, the welcome changes are not uniformly distributed. There are still areas where it has yet to show its mettle.

IF YOU want to know who are Syarikat Telekom Malaysia's big-spending and fast-growing customers, consider these facts: last year, business telephones accounted for 50.2 per cent of STM's revenue, telefax customers trebled, Maypac and Datel users doubled and inland private leased lines rose 14.9 per cent. The businesses, as a whole, are the heaviest users of voice, text and data transmission and switching facilities provided by STM.

Banks, electronics firms, oil companies and manufacturers have yet to be bowled over by changes in STM after it acquired

RAJ: Some improvement

MAYPAC: High charges deter more of its usage

private status in January 1987. To be fair, some remarkable changes for the better have occurred. But long-standing grouses surrounding high tariffs and slow technical trouble-shooting still remain.

For a start, the switch from government to private standing has enabled STM to show its mettle. Thumbs up for the change in attitude among its employees who come face-to-face with customers. The 83 *Kedai Telekom*, where one applies for services, pays bills and makes inquiries, are the most common meeting place. It's not all smiles and hello, like when you step into McDonald's. But the change has been strong enough to warrant notice. 'Since privatisation, STM people are more commercial-minded in their conduct of business. There is vast improvement at the front door of *Kedai Telekom*,' observes Parama Raj, a system analyst at Perkom Sdn Bhd.

MARKETING APPROACH. Another visible about-turn is STM's marketing approach. It now emphasises 'go to the customer' rather than the previous 'wait for the customer' and this is cannot be illustrated more clearly than at the *pasar malam*. Yes, unbelievable by true — STM runs booths at the night markets which offer new phones within a week. That's for the ordinary guy. Corporate clients get a more personalised touch. Says a bank executive, 'In the past, when applying for services for the bank, I had to make an appointment to see Telecoms officers. Nowadays, they insist on coming to see me.'

The grouse, however, is that these welcomed changes are not a uniform feature throughout the country. Businessmen say the improvements are concentrated in the metropolitan areas, leaving out towns like Kuala Terengganu and Kota Baru. Besides, inconsistencies in different application procedures in different geographical locations still give some businessmen the run-around. Credit card companies, for instance, which need to secure telecommunication lines for credit authorisation have had such headaches.

Perhaps the most meaningful metamorphosis where the business sector is concerned is that STM is no longer an inflexible institution where it involves charges. An EDP manager says STM has given a substantial reduction in Datel, dial-up data transmission, charges since the second half of last year — from 720 rgt to 120 rgt a year. He is quite convinced STM has adopted an accommodating approach and is willing, when there is commercial sense for it, to charge lower than approved tariffs.

But despite this, high charges for services remain a common complaint of business clients. This is most obvious for packet switching, the Maypac (Malaysian Packet Switched Public Data) network. The high charges are partly to blame for the still low usage of Maypac; it has only 626 customers as at the end of August. The charges for Maypac are both time and volume sensitive. Raj, who deals in credit authorisation

TELEX USERS AUG 31, 1988

Area	No of customers
SABAH	1,203
SARAWAK	1,093
Johor	654
Melaka	154
N Sembilan	138
SOUTH	946
Selangor	1,719
Fed Territory	3,428
CENTRAL	5,147
Kelantan	85
Pahang	178
Terengganu	156
EAST	419
Kedah	160
Perak	448
Perlis	30
Penang	882
NORTH	1,520
MALAYSIA	10,328

REVENUE SOURCES DEC 31, 1987

Source	%
Residential telephones	34.1
Business telephones	30.2
Telex	1.8
Public payphones	1.4
Telex	8.4
Data services	0.1
Leased services	3.9
Miscellaneous	3.1

MAYPAC USERS AUG 31, 1988

Area	No of customers
SABAH	40
SARAWAK	47
Johor	49
Melaka	18
N Sembilan	22
SOUTH	89
Selangor	104
Fed Territory	175
CENTRAL	279
Kelantan	22
Pahang	35
Terengganu	18
EAST	75
Kedah	25
Perak	30
Perlis	14
Penang	53
NORTH	122
MALAYSIA	632

equipment and point-of-sale terminals, finds that it adds up to 17 sen per transaction on a permanent virtual circuit; he thinks 5 sen per transaction is an acceptable amount. This present high cost makes it uneconomical for merchants (retail outlets which accept credit cards or bank cards for payment) to use credit authorisation terminals. Needless to say banks are lobbying for reduced charges.

In the same vein, the impending launch of another packet switching network called Mayjis (where charges are based on time) is expected to be met with nonchalance. 'With existing level of charges, I don't think anyone will use it,' says one banker.

SUBJECTIVE EVALUATION. Overseas telephone call charges that have not been reduced are still a subject of discontent. The rate is considered high, but this is a rather subjective evaluation. It is natural to compare against others and when Malaysians do this they find rates very much cheaper in Singapore. STM executive director Dr Syed Hussein comes to the defence. He explains it is unfair to compare with Singapore since it is an island and that requires far less investment in telecommunications infrastructure. He admits there is an element of cross-subsidisation between overseas and local calls, which are now free for the first 100 calls. But he points out that the rates in Malaysia are not at all expensive when compared to those in countries like Japan and Switzerland.

Charges aside, many are pleased they can now make calls to 115 destinations world-wide. By the end of November they will be able to reach 165. The move towards IDD (international direct dialing) is also welcomed.

For businesses, international connections via satellite was given a boost when STM started the Intelstat Business Service (IBS) last year. This establishes communication links with countries in the Pacific region, especially the United States of America. However, this service is only available in Penang and Kuala Lumpur. Hence, only eight customers have access. One foreign bank applied and was disappointed when told to wait for a channel.

In terms of reducing technical faults, STM has yet to achieve a tip-top and reliable image. Downtime for business telecommunication lines and networks are still not up to mark. One can't blame users who expect 99.9 per cent uptime. Financial institutions, for one, cannot afford very high downtime since their business depends a lot on electronic fund transfers. This has led some banks to engage their own maintenance staff to speed up repairs. And this is partly why banks rely more on private leased circuits than switching facilities. Leased lines are considered one of STM's golden gooses — small in volume but high in profitability.

For back-up and added security, banks usually have two lines per branch. But getting connected to East Malaysia via leased circuits is still considered a luxury, even for banks. This has slowed down the nationwide link of automated teller machines between the peninsula and Sabah and Sarawak. Although pioneered by Hongkong Bank, it was only recently that Bank Bumiputra, Malayan Banking, Chartered Bank and Bank Simpanan Nasional could follow suit. 'Since it is actually the same country, there should be some subsidy to reduce the costs to banks,' says one bank manager.

CORRUPTED FAX. For text communications, telefax is fast winning over more customers than the telex. As at end August, there were 9,820 telefax customers — almost as many as the 10,328 telex customers. But inconsistent quality of service has created some dissatisfied customers.

TELEFAX USERS AUG 31, 1988

Area	No of customers
SABAH	665
SARAWAK	1,090
Johor	800
Melaka	143
N Sembilan	99
SOUTH	1,002
Selangor	1,708
Fed Territory	3,234
CENTRAL	4,942
Kelantan	102
Pahang	143
Terengganu	136
EAST	383
Kedah	126
Perak	487
Perlis	21
Penang	1,104
NORTH	1,738
MALAYSIA	9,820

ITEMISED billing facility. Much appreciated by corporate clients

who complain of 'corrupted fax'. 'In the Brickfields area where the lines are very clean, it is fairly good. But in some parts of Ampang, where there are bad lines, many parts in a transmission are missing or blurred,' complains Raj.

In many cases, it is not that STM technicians do not respond to complaints of breakdown, it is just that many do not have the relevant equipment and know-how to rectify problems. This boils down to the question of training. 'I think more than 90 per cent of them (technicians) are trained on the basic telephone network. If anything goes wrong with the phone, they can handle it. But if it comes to the telex, only the remaining 10 per cent know how to attend to it,' says one banker. Banks, however, are grateful that STM has set up a specialised unit to look after data switching equipment called DOMC or Data Operation Maintenance Centre.

STM has also been congratulated on introducing value-added services, notably itemised billing and enhanced telephone facilities, last year. Itemised billing costing one rgt is much appreciated by corporate clients since they can trace unnecessary calls by their staff. The demand now is for its services to be extended to other parts of the country. Syed Hussein says this will certainly be done. Eventually STM services will be available nationwide.

However, despite dealing with a private telephone company, many businessmen say they are still resigned to the fact that STM has a monopoly on services. In other words, they have no option, as they do in other countries. 'If anything went wrong with the phone in the US and is not repaired quickly I would just tell them to disconnect it and go to another phone company. They will have my phone wired up in no time at all,' one businessman says.

EARTH stations: Links with other countries

NEW PRODUCTS

SURPRISES IN STORE FROM STM

Commercial users will soar on telecommunications advances and benefits when STM introduces electronic mailing, a sophisticated mobile telephone and SWIFT. But at what price?

WHAT has Syarikat Telekom Malaysia in store for its customers in the months ahead? As a 'government' department in the past, this question would have raised proud disclosures. Now a private enterprise, STM is more guarded about what it says.

The preference for keeping planned services under wraps are based on normal commercial reasons — fear of arousing unnecessary lobbying and potential competition. But *Malaysian Business* finds that the business community may be taken on a leap in telecommunications technology when STM unveils its latest services.

The new products are likely to compete and even phase out existing telecommunications services. How well they are accepted and utilised will depend on the marketing abilities of STM and how receptive people are to paying. As with most new products, the high initial investment outlay tends to result in a high introductory price. The problem is this sets off a vicious circle: the high price deters wider usage, which in turn makes it uneconomical to operate except at higher cost.

For STM, this has to be approached practically, given the need for profitability. STM can be expected to be down-to-earth in its pricing policy. Executive director Dr Syed Hussein acknowledges this. 'We have to expect returns from what we invest in.'

Mailing and messaging will take a modern turn when STM launches electronic mail or Telemail next year. This is an electronic version of the post office box. Using simple gadgets — the telephone, modem and personal computer of any make (with relevant software), a company can create messages and send them to any other company's electronic mailboxes at the touch of a few buttons. Messages are sent or retrieved using passwords.

ROUND THE CLOCK. For those who own PCs at home and don't want to pay the expensive start-up and operating costs of a telex or facsimile, electronic mail is ideal. The service is exceptionally convenient in that one can send or retrieve messages or information at any time of the day or night. It's a round-the-clock service. Speed is another plus point. Technically speaking, the speed for electronic transmission is measured in bits per second (bps) and it ranges from 300 to 2,400 bps. In practical terms, this means being able to transmit 30 foolscap pages of information in less than a second.

For the initial launch, targeted for next January, STM is offering 3,000 mailboxes. It is making use of the Telemail 400 communication system developed by Telenet Communications Corporation in the US. Whether or not a company will subscribe, given the acknowledgement of its benefits, will depend on the charges proposed. Syed Hussein declines to reveal the tariffs STM has in mind, except to say that they will be based on volume and time.

However, to give an idea of the relative cost-benefit equation, Ngeam Chong Lee, general manager of Spectron Sdn Bhd, the local distributor for Telenet, says that in the US, there is an estimated saving of one-third of costs in electronic mailing compared with telexing.

Electronic mail services are already operating in countries like Singapore, Hong Kong, Japan, Australia, Canada, Chile and the United States. But Malaysia will score a first when it launches Telemail since it will be the first Southeast Asian country to introduce a system that follows the X.400 international standard laid down by the International Telegraph and Telephone Consultative Committee (CCITT).

This means subcribers to Telemail in Malaysia can communicate with foreign mailboxes that comply with X.400. The latter include Hong Kong, Australia and the US — provided STM concludes agreements with these countries. But messaging Singapore is out since the mailing systems are based on different standards.

An enhancement of the electronic mail is the electronic document interchange or EDI. This facilitates the sending of stan-

dard documents like invoices, sales orders and letter of credits. Using a programme, a format document appears on the computer screen. All that is needed is to fill in the relevant blanks. The filled-in info will be sent and these will appear in the correct places in the same format document at the receiver's end. This saves cost and time for both user and receiver.

One may be apprehensive about the safety of information relayed electronically. Can confidential matters be read by those they are not intended for, like staff or competitors? Ngeam says there are in-built security checks within the system. 'Of course, you mustn't let anyone know your password. You should change it regularly too,' he says. He explains that three or four levels of security via different access codes — the electronic lock and keys given to specific people in a company — restrict the flow of information.

For businessmen on the go, a device akin to the mobile phone or Atur (automatic telephone using radio) which will be introduced next year, may throw some in a predicament. Since it was introduced in 1985, Atur has become the 'in thing' for many corporate directors and self-made *towkays*. Today, the number of subscribers has grown to about 24,000. But of late, there have been many complaints of cross-talk and busy lines. The introduction of a second channel for mobile phone users is expected to relieve the present congestion. But there is another side to the story.

ADVANCED TECHNOLOGY. The second channel, to be called Avt 900, is based on more advanced technology using 900 mega hertz radio waves compared to the 450 mega hertz of the present system. Avt 900 will be restricted to Kuala Lumpur and Johore Baru. The reason, says Syed Hussein, is these are the two areas of high demand for mobile phones. The reception would be much clearer since the new system caters for a high density of calls within smaller geographical areas. Users can make and receive calls to any part of the country or world if they are in either KL or JB. But once they move out, their mobile phones cannot function.

This is expected to put businessmen, who have already invested in mobile phone sets, in a tight spot. They would want to switch over to the second channel to get better service but this means purchasing new sets. New users would also have to decide on the type of set to buy. The consolation is that the new sets will be smaller and slightly cheaper than the present ones. What about the service rates? 'Almost similar to Atur,' is all Syed Hussein is willing to divulge.

STM is also involved in another service — making the world smaller for the banking community. This is the coming telecommunication link-up of local banks to Swift — the Society for Worldwide Interbank Financial Telecommunications — a global financial transfer network exclusive to banks. This is expected to make its appearance in the first quarter of 1989 and is made possible with STM laying down the infrastructure locally and internationally to connect to the Swift network. The Swift regional processor will be housed in STM's premises and STM will oversee the operation and administration of the processor.

A new frequency band for mobile phones

Some 24 local banks and 11 associates, who are members of Swift, will be making use of the network. According to one bank EDP manager, the hook-up to the network will cut operating costs for banks when making interbank payments all over the world and cut down usage of the more expensive telex service. The electronic transfer of payments would in turn speed up many companies' ability to move funds around the globe.

STM's Telita: Information at a tap

Companies and consumers will probably hear more about STM's videotext service called Telita (Telekoms Lihat Tahu) by year-end. The service is set to be officially launched, taking on a more commercial approach after a lukewarm response to its pilot project last year. Telita is an interactive communication service. With a telephone, simple keyboard attached to a television set (with adaptor) or a modem and a PC, one can call up a host of information from different sources.

A fully developed videotext network has many commercial applications: home banking, home shopping, advertising, games, mail and ticket reservations. Telita is a long way from this and it comes as no surprise since it has only met with limited success in other developed countries. The most notable network is Prestel in U.K. It will take a long time to educate the commercial sector and consumers on its uses and benefits.

The soon-to-be introduced STM services may not exactly be state-of-the-art but if their technical performance and prices meet corporate needs, they will enhance the country's telecommunications infrastructure. Reliable, fast and cheap communication facilities give businesses the edge in today's highly competitive corporate world.

APPENDIX C

MANAGEMENT UPDATE

MAY 1989

For Private Circulation

Management UPDATE

• Econsult Sdn. Bhd.
• Strategic Consulting Group Sdn. Bhd.

SCG COMPLETES FIRST STAGE OF EXPORT MARKETING PROGRAMME

The Geneva-based Market Development Institute has complimented SCG on its successful implementation of the first stage of its Professional International Diploma in Export Marketing. Its Principal, Dr G A Schmoll, a consultant to international organisations as the International Trade Centre, UNCTAD, GATT, and the World Tourism Organisation, is keen to launch a Senior Managers' Export Management programme later this year.

SCG's Senior Executives with the Honourable Minister of Education, YB Anwar Ibrahim

AUSTRALIAN MANUFACTURERS SEEK MALAYSIAN AGENTS

As follow up to recommendations made in Econsult market research studies, an increasing number of Australian manufacturers are visiting Malaysia. They are coming to make a first hand assessment of market potential and to have discussions with the suitable agents for their products that were identified in the Econsult studies.

Recent and confirmed visitors have included manufacturers of : computer software; ploughs; optic fibres; gearboxes; valves; road maintenance and repair equipment etc.

EXPORT MARKETING FOR BUSINESS EXPORT

Economist David Dennis and Senior Export Marketing consultants, Adrian Villanueva and Allen Oberndorf will be conducting a two-day seminar on "Export Management" in Kuala Lumpur from July 20-23, 1989. The seminar is designed for government agencies, manufacturing, trade organisations, financial institutions, shipping companies, airlines, and other export-oriented organisations.

Key topics include Opportunities and Prospects for Asean countries, a case study on "Penetrating the Japanese Market", and a dialogue session on "Fortress Europe 1992".

PROFILE OF DAVID DENNIS

David Dennis has been Managing Director of Econsult Sdn Bhd since the company was formed in mid 1985. He is an Australian with a Bachelor of Commerce degree and a Masters in Economics.

Before coming to Malaysia, David had worked as a Senior Economist in Papua New Guinea from 1971 to 1976 and again from 1979 to 1985. In that period he worked for the Government in the Department of Labour and Industry, the Department of Finance and the National Planning Office. He provided advice on economic policy issues generally and on human resource development, manpower planning and training issues in particular.

In 1983 David became a full time consultant and since that time his clients have included the World Bank, the Asian Development Bank (ADB), the Australian Development Assistance Bureau, and the Papua New Guinea Institute of Applied Social and Economic Research. In addition he has had a wide range of private and public sector clients in Papua New Guinea, Australia, Malaysia and Indonesia.

David first came to Malaysia in 1984 as Manpower Specialist on the World Bank funded Industry Training Scheme study for the Ministry of Labour. In 1985 he returned as Manpower. and Economic consultant on the Malaysian Industry Master Plan conducted by the United Nations Industrial Development Organisation (UNIDO). The most recent of his international agency work was in October - December 1988 when he was Labour Force and Economic Planning Specialist on the ADB's Second Vocational Education Sector Project in Indonesia. This project was to assess the proposal for a US$150 million loan for the vocational education system.

David also has a strong background in market research and is responsible Director for the Market Entry Strategy Programme conducted by Econsult in Malaysia since 1986 for the Victorian Department of Industry, Technology and Resources.

MALAYSIAN INSTITUTE OF DIRECTORS

DIRECTORS AWARD FOR ROBERT KUOK

SCG was invited by the Malaysain Institute of Directors to congratulate business magnate - Mr Robert Kuok on being conferred a Fellow by the Institute.

In his Keynote Address, Mr Kuok outlined the relaitonship between the Government and the corporate sector, the current state of corporate activity, the economy's conditions, and the factors needed for Malaysia's economic success.

WINNING STRATEGIES FOR BUSINESS EXCELLENCE

SCC's Corporate Affairs Director, Steve Subramaniam and William Miller, former Senior Consultant of the Business Innovations programme in SRI International (Stanford Research Institute, California, USA)

The quality of relationships in an organisation is the internal productivity factor that determines its image, product quality, design, distribution, reliability, and superior customer service. This factor will be taken up in a new marketing management training programme conducted by Corporate Affairs Director Steve Subramaniam and SCG's Associate Marketing Consultant Professor Allen Oberndorf, former World Bank Consultant for the Canadian and Malaysian Governments and private sector clients in the ASEAN region.

The objectives of the above training programme are threefold :

(a) To identify the creative resources of corporate/organisational leadership and marketing stategy as winning factors;

(b) To assess and discuss state-of-the-art techniques for aggresive marketing in a competitive environment;

(c) To recommend innovative strategies to achieve sales and marketing excellence.

ECONSULT INPUT FOR ASIAN DEVELOMENT BANK

Econsult has been chosen to provide economic expertise in two Asian Development Bank Studies.

In the first of these studies, Econsult Director David Dennis was engaged as Labour Force and Economic Planning Specialist on the Bank's Second Vocational Education Sector Project in Indonesia. The project ran from October to December 1988.

The Second project is situated in Malaysia. It is entitled the Coastal Village Environmental Improvement Project and Econsult Associate Chang Yii Tan has been engaged as Economic Analyst with responsibility to assess the social cost and benefits of providing sanitation service to 50 coastal villages in East and West Malaysia. The project is currently underway and will be complete by the middle of the year.

EXPANSION OF MARKET ENTRY STRATEGY PROGRAMME

Econsult Consultant June Ooi is visiting East Malaysia and Brunei to conduct market research for three products manufactured in Victoria.

This visit marks an expansion of the Market Entry Strategy Programme which has previously been available in West Malaysia and in Singapore.

MALAYSIAN-MAURITIUS BUSINESS DEVELOPMENT COUNCIL

SCG's Managing Director, Bob Lee and Business Development Manager, Helen Mun have been invited to join the management committee of the Malaysia-Mauritius Business Development Council which is affiliated to the National Chamber of Commerce and Industry of Malaysia (NCCIM).

This council will provide a business forum for exchanging views and projects, both domestic and international, affecting Malaysia and Mauritian organisations and personnel.

Ghazali bin Dato' Yusoff is the President while SCG's Helen Mun is the Membership Director.

ECONSULT INVITED FOR MAJOR KTM PROJECT

Econsult has recently been invited to tender for a project which involves a reassessment of passenger fares on KTM trains and railbuses. The project is an important integral part of KTM efforst to increase income and become a more commercial organisation.

The study will involve large scales surveys of rail, road and air passengers as well as demand forecasts and cost analyses.

If successful, the Econsult team will include Dr Esther Tan and David Dennis from KL office and Dr Stewart Joy from Econsult Transport Service in Sydney. Dr Joy is a former Chief Economist for the British Railways Board and has consulted on railways in the U.K., the U.S., Australia and Malaysia.

MARKETING EXCELLENCE

The Strategic Consulting Group is honoured that its two associate consultants Professor Geoff Lancaster and Lester Massingham have co-authored a major work entitled "Essentials of Marketing" published by MC Graw - Hill. Professor Lancaster has published widely in learned journals and is an the Editorial Board of 3 marketing journals in the USA and UK. He has also served on the various Boards of The Institute of Marketing (UK) which has a worldwide membership of 21,000.

Professor Geoff Lancaster of London, SCG's associate consultant, shares a marketing insight with Chairman Abdullah Mohd Yusof

JAYCEES OUTREACH SALES SEMINAR

Kuala Lumpur Jaycees, a member of Jaycees International (JCI) with over 500,000 members worldwide, organised "the Winning Edge in Sales" on March 29, 1989. Speakers included Tan Joo Seet, Vice-President of Zenger Miller Southeast Asia, K.C. Lau, Executive Director of Markrite Sdn. Bhd. and SCG's Corporate Affairs Director Steve Subramaniam.

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